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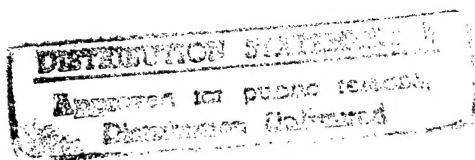
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CHINA

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NATIONAL REGULATION ON PRIVATE BUSINESSES ISSUED

HK190230 Beijing CHINA DAILY in English 19 Aug 87 p 1

[Article by staff reporter Nie Lisheng]

[Text] The State Council has issued a national regulation to strengthen supervision and administration of mushrooming private businesses, which are now owned and operated by 12.11 million households consisting of 18.46 million people.

Effective on 1 September, the regulation's 28 articles stipulate that the urban jobless and rural villagers who have adequate means for business management are entitled to start private shops or enterprises after they have registered with local industrial and commercial administration bureaus for licences.

They can work alone with their personal property as guaranteed for possible civil liabilities, or operate on a household basis with their family property as security.

Self-employed individuals or families are allowed to take on one or two helpers, or three to five apprentices if the employers are skilled laborers.

The regulation, issued by the State Council on 5 August, is the first national law covering private businesses in both urban and rural areas, CHINA DAILY learned yesterday at a national conference on industrial and commercial administration in Beijing.

Since the introduction of economic reforms and open policy in 1979, private businesses have been revived. There are now 2.91 million households consisting of 4.08 million people in towns and cities and 9.2 million rural households consisting of 14.38 million people in private business, said Ren Zhonglin, director of the State Industrial and Commercial Administration, in a written note on the regulation.

The resurgence of the private economy has not only helped increase production and enliven consumer markets, but also provided more job opportunities, he said. But stricter efforts should be made to address

such irregularities as selling fake goods, short measuring when selling goods, tax evasion, speculation, profiteering and swindling.

Under the new regulation, eligible individuals or families should go to local industrial and commercial administration bureaus for licences to run businesses in industry, handicrafts, construction, communications and transport, commerce, catering, repair and other service trades.

Those who want to run hotels, seal-making shops and shops which sell items on commission, must also get permission from local departments of public security.

The regulation also stipulates the legitimate rights of private businesses are protected by State laws.

Business sites should be arranged under a unified plan by local people's government. State-run wholesale units should also make sure that private businesses are not short of raw materials, fuel and retail goods.

With their business licences, private businessmen may also open accounts and get loans at banks and other financial organizations. No units or individuals are allowed to impose any kind of levies on private businesses without authorization by law and regulations of the State or local government.

Self-managed laborers are strictly forbidden to engage in any of the following activities: speculation, swindling, smuggling, illegally driving up prices at markets, passing off low-quality goods as good ones, short measuring when selling goods, selling fake and unsanitary goods, selling reactionary, absurd or pornographic publications, pictures, recordings and videotapes, and evading and refusing to pay taxes.

Those involved in the above irregularities and those unlicensed businesses that have not registered with local industrial and commercial administration authorities will be given disciplinary warnings, fined, have their illegal incomes confiscated, ordered to close down or have their business licences suspended or cancelled. In serious cases, the offenders may even be prosecuted according to State regulations and laws.

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CSO: 4020/258

HUNAN FACES 'RIGOROUS' FINANCIAL SITUATION

HK190157 Changsha Hunan Provincial Service in Mandarin 0000 GMT 19 Aug 87

[Text] A provincial financial work conference which concluded on 15 August pointed out that Hunan is continuing to face a rigorous financial situation this year, with very many difficulties and problems. We must work hard in promoting reforms and in increasing revenue and economizing expenditure in financial work in the last 5 months of the year.

This year the financial and taxation departments at all levels have got a good grasp of reforms and of promoting the double increase and double economy drive. They have done a lot of work in organizing revenue, cutting expenditures, supporting reform, and strengthening management. The revenue situation from January to July was relatively good. The big increase in expenditures that has continued for several years has now been basically put under control.

However, the province continues to face a rigorous financial situation. There are very many difficulties and problems. The task of achieving a balanced budget is extremely arduous. In view of this, the conference proposed that stress must be laid on the following aspects in the next few months: Continue to promote the contracted management responsibility system; ensure increased revenue from the main sources of taxation, take stock of and straighten out the secondary sources, and do a good job in raising revenue from new sources; strictly control capital construction carried out with self-raised capital, together with the purchasing power of social groups, and resolutely oppose extravagance and waste; in the next 5 months, the provincial, prefectural, and city authorities are forbidden to authorize any reduction of taxes or increase of expenditures.

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CSO: 4006/895

JOURNAL DISCUSSES DEFICITS, FINANCIAL CYCLES

Guangzhou GUANGZHOU YANJIU in Chinese No 6, 1987 (Undated) pp 3-9

[Article by Xi Zhi [2649 0037] of the Chinese Economic Structural Reform Research Institute: "A Positivist Analysis of the Financial Deficits Problem in Recent Years--and a Concurrent Discussion of Cyclical Movements in Financial Revenue and Expenditure"]

[Text] Since 1978, following the readjustment of income distribution policies and the implementation of the economic structural reforms, very great changes have occurred in the structure of our country's allocation of national income. As manifested in financial revenue and expenditure, the most obvious difference has been the great reduction in the scale of financial revenue and expenditure and in the successive years of financial deficits. According to estimates, the 1986 financial deficit could reach 10 billion yuan, while the 1987 deficit will be even larger. This article will attempt to explain why such major changes have occurred in the financial situation, what sort of effects this will have on the development of the national economy and how we are to solve the deficit problem.

I. The Patterns of Cyclical Changes in Financial Revenue and Expenditure

The scale of financial revenue and expenditure is determined by the size of the state's functions. The latter is in turn determined by the economic structural form. In general, under a certain economic structure, the scale of financial revenue and expenditure will have a certain stability. However, financial revenue and expenditure as component parts of the reallocation of national income and as targets in state adjustment of economic activities, have the characteristics of changing following the changes in the economic situation. As in countries which have market economies, changes in our country's financial revenue and expenditure have a clear cyclical nature.

1. The Proposal of Financial Cycles

Since the founding of the PRC, because of the influence of economic and non-economic factors such as fixed asset investment and natural disasters, our country's economic development has seen five cycles. The period 1954 to 1961

was the first cycle; the period 1961 to 1968 was the second cycle; the period 1968 to 1974 was the third cycle; the period 1974 to 1981 was the fourth cycle; and the period 1981 to present is the fifth cycle. (Footnote 1) (For a detailed analysis of our country's economic cycles, see the article "Economic Growth and Pricing Levels" by Liang Tianzheng [2733 1131 1767] and Li Shuhe [2698 2885 0735] carried in JINGJI FAZHAN YU TIZHI GAIGE (ECONOMIC DEVELOPMENT AND STRUCTURAL REFORM) 1987, No 3) Corresponding to these cyclical fluctuations in economic growth, our country's financial revenue (Footnote 2) (In this article, when financial revenue is spoken of, it does not include domestic or foreign credit) also has cycles which in terms of time divisions are almost the same (See Chart 1). Specifically, our country's financial revenue cycles have the following characteristics:

- a. Financial revenue and the speed of economic growth move in the same direction.
- b. The acceleration of movement in financial revenue is greater than the acceleration of movement in national income. In terms of financial revenue as a proportion of national income, when the economy grows, the proportion of financial revenue in national income also grows; when the economy declines the proportion also falls.
- c. If we take 1976 as a boundary, the relationship between financial revenue and economic growth in the period before 1976 and the period after 1976 are different. Prior to 1976, the fluctuations in our national economy were manifested as classical cycles, while subsequent to 1976 they were manifested as growth cycles (Footnote 3) (Classical cycles refers to cyclical economic fluctuations in which there is absolute growth and decline in the level of economic activities; growth cycles refer to cyclical economic fluctuations in which there is relative growth and decline (that is, the chain growth rate increases or declines) in the level of economic activities). Correspondingly, prior to 1976, the changes in the proportion of financial revenue in national income tended to be consistent with the changes in the chain growth rate for national income.
- d. In terms of the directional trend, there was a great difference in the proportional relationship between financial revenue and national income before and after 1978. Before 1978, the proportion fluctuated around 33 percent, while after 1978, the proportion declined greatly for 4 successive years and subsequently stabilized at around 26 percent.

The volume of financial revenue determines the volume of financial expenditure. Large revenue means large expenditure and small revenue means small expenditure. Thus, like financial revenue, financial expenditure also has cyclical movement.

2. Financial cycles have their origin in the common direction of changes in the speed of economic growth and economic results.

Since the founding of the PRC, a notable characteristic of our country's economic life has been that the speed of economic growth and economic results

have moved in the same direction. If we take comparable product cost as the index of results, when there is a high speed of economic growth, costs decline, while when economic growth is low, costs increase. This is the case in industry as well as in agriculture, construction and transport. Seen in terms of cost structure factors, fixed asset productivity, consumption coefficients and labor productivity, all move in the same direction as economic growth rates.

The reason speed of growth and results move in the same direction is that the degree of fluctuations in the amount of key elements put into production are smaller than the degree of fluctuation in output quantities. That is to say, when output quantity increases, the increase in the quantity of production elements used will be less than the growth in output. Thereby, the separate costs of per-unit output value will decrease. When output quantity decreases, the increase in the quantity of production elements used will be greater than the growth in output. Thereby the separate costs of per-unit output value will increase. In this, the rigidity of fixed assets derives from the quite long cycle involved in the formation of fixed assets. The rigidity of energy and raw materials use volumes is produced by the patterns of industrial structural adjustment: when the economy is growing, the proportion of industrial output value of energy, raw materials and other basic industries in total industrial output value declines. When the economy is declining, the proportion of basic industries' output value grows. The rigidity of the use volume of staff and workers derives from the difficulties of transferring labor between industries, and the rigidity of population growth and decline and other factors. Of course, as there is no market for the important production elements, the fact that productivity of material elements and growth in output value move in the same direction, is related to the rigidity of the prices of important elements. When the economy is growing, the price of important elements does not increase, and whenever the economy is in decline, the prices do not fall. The productivity of important elements naturally can be consistent with changes in output value.

Corresponding with the fact that the direction of changes in labor productivity are the same as those in output value, wage rates (per-capita wages) move in the opposite direction to national income. This relationship is produced not only by common price rigidity factors in important production elements given rise to by the planned economy system, but also by the relative wage stability produced by consumption stability, the generally quite low wages of newly-added labor, the fact that the speed of economic growth and the speed of labor increase move in the same direction (and therefore wage rates and the speed of economic growth move in the same direction) and other factors. (Footnote 4) (For an analysis of the question of the relationship of common directional changes between the speed of economic growth and economic results and the adjustment patterns of industrial structure in economic fluctuations, see the article "The Chinese Economy Under the Restraints of Variable Material Factors" by Li Shu He and Liang Tian Zheng. This article was published in JINGJI FAZHAN YU TIZHI GAIGE, 1987, No 4. "Economic Growth and Pricing Factors" by these two persons also contains an explanation.) (See Chart 2).

The common direction of movement in the speed of economic growth and economic results and especially the common direction of the movement of wage rates and output value has directly led to another phenomenon in our country's economic cyclical movement--the emergence of financial cycles. Furthermore, the

acceleration of movement in financial revenue is greater than the acceleration of movement in national income.

The relationship between financial revenue and expenditure and economic growth in the fourth and fifth cycles was not very similar to that in the previous three cycles. However, the pattern of financial cycle fluctuations was not affected. First, after 1976, although the movement of financial revenue and national income was no longer in the same direction as the fixed base ratio index of the national economy, it was consistent with the comparative growth of a variable base of national income. The reason there was this difference was that after 1976, in economic development there were only changes in the rate of growth and there was no longer declines in absolute terms. Second, after 1978, the proportion of financial revenue in national income declined for successive years. However, the proportional curve still moved in accordance with the economic situation curve. It was just that the amplitude of the curve was smaller.

Another thing which needs to be explained is that there is no fixed and unchanging relationship between financial income and expenditure. When the economy is growing, the financial situation may be a deficit and may also be a surplus. It is the same when the economy is on a downturn. It can be seen that in our country there is no pattern in the relationship between financial deficits and the economic situation. That is to say, there is no problem of cyclical financial deficits. (See Chart 1) There are certainly specific reasons why our country has had deficits for successive years since 1978.

II. Specific Reasons for Financial Deficits in Recent Years

If we exclude liability revenue from financial revenue, from 1979 to 1985, our country's finances have seen 7 successive years of deficits. In a full economic cycle (1978 was the peak of the fourth economic cycle and 1985 was the peak of the fifth economic cycle) there was a deficit every year. This was the first time this had occurred since the establishment of the PRC. If large deficits occur in 1986 and 1987, it will be nine successive years of deficits. The above analysis tells us that there is no pattern between deficits and financial cycles, so it seems that non-cyclical specific factors are the major reasons for the financial deficits in recent years.

1. If the decline in the proportion of financial revenue in national income is too rapid, it will lead to successive years of deficit.

On the basis of the factor analysis method, we have carried out a calculation of the pricing levels, financial revenue/gross value of social product (replacing the financial revenue/national income index) and comparable product output volume, which are factors which influence financial revenue, for the years 1978 to 1985. From 1978 to 1985, financial revenue grew 74.5 billion yuan. In this, the decline in the proportion between financial revenue and gross value of social product caused a financial decrease of 80.6 billion yuan; and the comparative product output volume increased, providing 110.6 billion in financial revenue. These results show that the decline in the proportion of financial revenue in the output value of whole-people ownership enterprises has quite a large effect on financial revenue.

From 1952 to 1978, the average ratio between financial revenue and national income was 34.2 percent. In the period 1980 to 1985 this declined to 27.4 percent, a 20 percent fall. Seen in terms of the economic cycles, the decline in the proportion was even greater. From 1956 to 1985 [year as published] when the economy was growing, the ratio was 34.3 percent. From 1979 to 1985, in the same type of period, the ratio was 26.9 percent, a decline of 22.6 percent. This great decline of financial revenue in national income was closely related to the excessively swift growth in financial subsidies, excessive tax reductions and exemptions, the excessive retention of profits by enterprises, the expansion of the scale of bank credit and the raising of interest rates.

2. Financial subsidies and financial deficits.

The financial subsidies in 1985 saw a two-fold increase over those in 1978. If subsidies are included in financial revenue, in 1985, the proportion of financial revenue in national income would be increased by 7 percentage points. In addition, if we carry out an examination of the movement in the proportional relationship between cyclical financial revenue and national income, then we find that in the period 1978 to 1981, there was no major changes in the ratio. That is to say, if the financial subsidies remained at the 1978 level, the financial deficits in 1979 to 1981 could have been reduced or even perhaps turned into surpluses. From this we can say that in these 3 years, the major cause of financial deficits was the excessively swift growth in subsidies and the excessive size of subsidies.

After 1981, the volume of financial subsidies basically stabilized at 40 billion yuan. Beginning in the latter half of 1982, national economic development entered a growth situation, but in a situation where financial subsidies increased only slightly, the proportion of financial revenue in national income did not increase following the revival of the economy. It was only in 1985 when the economy was at its peak that this ratio reached the level of 26 percent which it had been in 1981, when the economy was at its low ebb. According to the patterns of historical cyclical movement, from 1983 to 1985 the proportion of financial revenue in national income should have increased year by year, and by 1985 it had been hoped it would be about 34 percent. Here factors other than subsidies played a major role.

Price subsidies comprise 60 percent of financial subsidies. The next major component is subsidies for loss-making enterprises, while tax reduction and remission constitutes the smallest percentage. (However, there is progressive effectiveness. This will be analyzed below.) In terms of their effects, from 1978 to 1981 price subsidies, especially grain and oil subsidies grew swiftly and in some cases there was even unrestrained growth. Thus the proportion of financial revenue in national income greatly declined. In this period, the subsidies to loss-making enterprises were maintained at a level of about 6 billion yuan. After 1982, the price subsidies basically stabilized at around 30 billion yuan. Seen from the trend of development, if there are no major pricing reform measures introduced, price subsidies will stabilize at about 30 billion yuan, while there may be a small growth in export subsidies to loss-making enterprises. Thus overall, the volume of financial subsidies will not grow excessively and this will have a stabilizing effect on finances.

3. Tax reduction and remission, enterprises' retained profits and financial deficits.

Beginning in 1980 with the trial-implementation of the system of proportional retention of profits by enterprises, the state has used the two methods of reducing or remitting circulatory taxes and increasing the proportion of profits retained by enterprises, in order to increase enterprises' profits. Thereby, enterprises retained profits have increased annually and the ratio of retained profits to output value has continued to climb. If we speak only in terms of reduction or remission of taxes, in 1978 the amount of reduced or remitted taxes was only 600 million yuan. In each year after 1980 the newly reduced or remitted amounts totalled 4 billion to 5 billion yuan, while in 1985 the amount of taxes newly reduced or remitted was 7.4 billion yuan. From 1979 to 1985, the total amount of reduced or remitted taxes was 35 billion yuan, about 15 percent of financial revenue for 1985.

If we take whole-people industrial enterprises with independent accounting as an example, the amount of profits retained by enterprises grew from 6.9 billion yuan in 1981 to 23.3 billion yuan in 1985, an increase of over two times. The retained profits as a proportion of output value grew from 1.8 percent in 1981 to 3.2 percent in 1984, while as a proportion of total profit taxes, they grew from 7.5 percent to 14.3 percent (in 1985 this proportion was 17.5 percent). The increase in the profits retained by enterprises has led to a reduction of two to three percentage points in the ratio between financial revenue and the output value of whole-people ownership enterprises.

Although financial subsidies stabilized in 1982, because of the retained profits of enterprises and other factors, the ratio of financial revenue to the output value of whole-people ownership enterprises continued to fall. If enterprises' retained profits had been maintained at the 1981 level, the ratio of financial revenue to the output value of whole-people enterprises in 1984 could have been 43 percent up on the 1981 figure.

Looking at things from the macroeconomic angle, we can see that apart from the subsidies, the reduction in taxes and the retention of profits by enterprises, other very major factors in the reduction of the proportion of financial revenue in national income, that is the reduction of the scale of finances, include the expansion of the range of bank credit, the raising of credit interest rates, wage increases and bonuses being added to costs, extraordinary changes in comparable product costs and so on. Now, not only are enterprises working funds supplied through bank credit, but short- and medium-term investment for equipment is also mainly supplied by banks. Under the system whereby bank interest is repaid prior to taxation, the inevitable result of the expansion of the scope of credit and the raising of interest rates is a reduction in the scale of financial revenue. The increasing of staff and workers' wages and having bonuses included in costs also plays a similar role.

Extraordinary changes in product costs had a major effect on financial revenue in 1984 and 1985. The first part of this article explained that in normal situations the rate of reduction of comparable product costs and the speed of

growth of comparative product output volume have a direct relationship. In 1984 and 1985, industrial output value grew at a fast rate, but comparable product costs also rose greatly. In these 2 years, the growth in output value of whole-people ownership enterprises was respectively 14 percent and 19 percent, while comparable product costs grew by 2 percent and 6.4 percent. The reason for this is related to the excessive growth in the price of material input elements in whole-people enterprises and the large increases in per-capita wages. Chart 2 shows that from 1982 to 1984 the direction of changes in per-capita wages in whole-people ownership enterprises went against historical trends (that of wage rates moving in the opposite direction to output volume) and increased quickly.

4. Readjustment of the financial revenue structure and financial deficits.

The above analysis shows that, in macro-terms, the cause of the excessively swift decline in financial revenue giving rise to financial deficits in 1971 to 1981 was the excessively swift growth in financial subsidies, especially price subsidies. After 1982 there was, following the reform of the economic structure, an initial readjustment of the national income distribution structure. For example, enterprises' retained profits increased, bank interest rates grew and staff and workers' wages also rose. Did then the changes in the sectoral income structure and especially the changes in the structure of sectoral finances handed over, given rise to by readjustment of the price structure, have an effect on financial revenue? We can explain this point by taking the whole-people ownership industrial enterprises with independent accounting as an example.

First, the trend of changes in the profit tax rates in the profit tax rate structure of industrial sector funds is the same as the trend of changes in the price structure. Further changes in the proportional structure of finances handed up and whole-people enterprise output value are the same as changes in the profit tax rate structure for funds. In the charts, the decline in the profit tax rates of both overall industrial funds and light and heavy industrial funds in 1985 was produced by the price index being lower than the rate of increase in product costs. In that year, the industrial price index was 6.2 percent while comparable product costs saw a rise of 7.4 percent. The changes in the price index for the manufacturing industry and the mining industry and the changes in the profit tax rate of their funds had their origins in the industrial structure readjustment patterns. In a period of economic growth (1982-85) the rate of growth in the output volume of the manufacturing industry was greater than that in the industries which produced raw and semi-finished materials, and they in turn had a faster growth than the mining industry. In a period when the economy is on the downturn, the opposite is the case (for evidence, see chart). According to the pattern of common direction of movement for speed and results, when the speed of growth of the manufacturing industry is high, although the price level is low, the costs quickly decrease and therefore the profit tax rate of funds increases. The same logic applies in the mining industry. These two consistent changes prove that changes in the pricing structure do not cause a great decrease in financial revenue. When prices are increased, industrial financial revenue increases correspondingly and when prices are reduced, the financial revenue of industries is naturally reduced.

Second, when prices are increased, the amount of profits retained by the sectoral enterprises increases quite greatly, while when prices are reduced, the amount of profits retained by sectoral enterprises increased only slightly. Thus the price structure and the profit retention structure change in the same direction.

From these two points we can arrive at the following conclusion: the influence of the pricing structure on financial revenue is quite small and it is not a major factor in the reduction of financial revenue. As to the influence of price subsidies, this has been explained above and need not be repeated here. As to the effects of structural changes in the five major sectors of industry, agriculture, commerce, communications and construction, this article will not attempt an analysis as data are lacking.

5. The structural readjustment of financial expenditure and financial deficits.

If we compare 1985 with 1977, we find that the proportion of economic construction expenditure in total financial expenditure dropped 10 percentage points, while cultural, educational, scientific and health expenditure together with administrative management expenditure, grew 9 percentage points. Further, structural changes seem to indicate that the financial deficits in recent years, especially those since 1982, are closely related to the growth in cultural, educational, scientific and health expenditure and growth in administrative management expenditure. In administrative management expenditure, the expenditure on public security organs has grown particularly quickly.

6. Potential economic growth and financial deficits.

According to estimates, the 1986 growth in financial revenue was lower than that in 1985 and the financial deficit will increase quite greatly. This financial situation is closely related to the economic situation in 1980. An analysis of the cyclical fluctuations in our country's financial revenue shows that, as compared to the economic growth rate, the financial revenue growth rate has a faster acceleration. Thus, if actual economic growth is lower than potential economic growth, the growth rate of financial revenue will be even less. If we use past situations as a means of assessment, the actual economic growth rate in 1986 was less than the potential growth rate.

First, the stocks of finished products universally increased. This was the case with investment products and consumer products as well as the case in production enterprises, circulation enterprises and consumption enterprises. By September 1986, the stock turnover period for steel products had reached 246 days (our country's normal stock period is about 180 days). Similar situation occurred with coal and cement.

Second, because major energy, raw materials and communications products (or services) which have been in short supply, saw a relative increase, the ratio of the volume of elements put into production to output volume increased and economic results decreased.

Third, as an effect of the policy of tightening investment, final demand especially investment demand was insufficient. The market price of major means of production in short supply changed from their rapid increases of 1985 and began a sustained fall. Compared to the beginning of 1986, there was an overall fall of over 10 percent.

According to a calculation of potential growth rates, in 1986 the potential growth rate for industrial output value was over 10 percent, but the actual growth rate was about 8 percent. This affirms that if demand had been appropriately freed (mainly investment demand) financial revenue would, following economic growth, have seen greater growth (compared with the actual growth rate in financial revenue in 1986). (Footnote 5) (The potential growth rate is a result of Comrade Fu Fenglei's [1788 7685 7191] calculations. For a discussion on the low speed of economic growth, see Song Guoqing [1345 0948 7230] et al, "Sustained Tightness May Lead to Economic Decline" in ZHONGGUO SHEHUI KEXUEYUAN YAOBAO (JINGJI), 1987, No 5).

Summing up the above, the deficits from 1979 to 1981 were produced by the price subsidies resultant from the pricing readjustments. The deficits from 1982 onwards were mainly the result of changes in the structure of primary distribution of national income. That is to say, enterprises, banks, individuals and other entities which are not financial departments enjoyed larger proportions of national income. Thereby financial revenue was reduced by quite an amount and financial deficits occurred. How then are we to view this matter and what counter-measures are we to take to resolve it?

III. The Nature of Financial Deficits and Counter-measures

Through the last few years of reform, the economic movement mechanism has seen quite great changes. Because of this, the scale and make-up of financial expenditure has seen major readjustments. In this background, the financial deficits of recent years are a problem which undoubtedly requires a new understanding.

1. The financial situation can no longer be a major indicator for assessing the economic situation.

Prior to 1978, enterprises' funds for expanding reproduction and even some of the funds for simple reproduction came from the financial administration and virtually all the profits of enterprises (including some depreciation funds) were handed up to the financial administration. Banks were only supplementary organs for realizing funds flow and providing additional funds to construction projects in the financial plans. Also individual wages were centrally controlled by the financial administration and saw little adjustment. In such a situation, the financial income and expenditure, and especially a financial deficit situation was a major indicator of the macroeconomic situation. One could see from this whether there was a balance in finances and credit and whether funds and materials were balanced. For example, if there was a quite large deficit in the financial administration and there was overdrawing from banks, ordinary circulating funds credit and the funds supplied to construction projects in which the financial administration had invested could not be

curtailed, or there would be little scope for curtailment, and the banks would only be able to respond by issuing more currency. Here, regular financial deficits, the increase in the issue of currency by banks and the increase in prices were related phenomena. However, through several years of reform, individuals, enterprises, banks and departments now all have the power to decide on production and investment. Thus, regardless of whether we talk in macro-terms or structural terms, a financial surplus or deficit cannot be a decisive comprehensive indicator reflecting the economic situation.

In macro-terms, when there is a financial surplus, it does not mean that total demand is insufficient, while when there is a financial deficit, it does not mean that total demand is overheated. Individuals and enterprises (banks are enterprise departments) may regulate demand and supply in directions opposite to that of the financial administration. For example, when there is a financial deficit, individuals and enterprises may for various reasons have little inclination to invest or consume. Thereby supply may be excessive and prices, rather than rising, will fall. The same is true in the opposite case. The situation in 1986 was like the first-mentioned case. There was a large financial deficit but because of insufficient investment, the economic growth rate was lower than the potential growth rate.

The structural question is also like this. Now the financial administration is only responsible for investment in energy, raw materials communications and other capital construction industrial sectors. Processing industry investment is basically carried out by individuals and enterprise departments. Apart from this, the investment funds of the financial administration only total about 40 billion yuan. Thus the investment direction of the funds invested by the financial administration cannot represent the direction in which the industrial structure is moving, and their role in indicating the product structure is even smaller.

It can be seen that with today's income distribution set-up, if we are to carry out an investigation of the economic situation, it is necessary to do a comprehensive examination of the financial administration, individual and enterprise aspects. Only thus will a relatively rational conclusion be obtained.

2. Financial deficits and reform efficiency.

The majority of the economic reform measures are related to finances. They either mean increased or reduced income or increased or reduced expenditure. The reform measures in recent years which have had the biggest influence on finances have been the raising of agricultural and sideline product prices, the reduction of taxes and the permitting of profit retention by enterprises, and the substitution of credit for fund allocation. However, an analysis of the question of financial deficits must give attention to how reform measures are selected, so that finances are affected as little as possible, but so that the aim of sorting out economic relationships is achieved, that is, to carry out efficient reform. As far as the three above-mentioned reforms are concerned, there was a great increase in financial expenditure, but reform results were not ideal.

From 1978 to 1983, the state raised grain prices several times, and this promoted the revival of agriculture. However, it affected state finances and the deployment of rural resources: 1. Annually it was necessary to expend 20 billion to 30 billion in financial resources on grain and oil price differential subsidies. 2. In order to ensure that the list price was paid and the unified distribution of grain and oil carried out, the state implemented a policy of state monopoly purchase of grain and oil. Thus the right of the peasants to freely select the deployment of their resources was restricted and the efficiency of the rural economy could not be increased. Apart from this, following the raising of the grain and oil prices, because the sales price did not rise or rose only slightly, wage relations could not be smoothed out and the situation of using subsidies to maintain low wages has been maintained until today. This is especially unnecessary as in 1983 our country's food grain output volume passed the point where supply did not meet demand and a surplus in supply was achieved. The freeing of grain prices is thus not difficult. Here financial subsidies are not playing a role in economic efficiency.

The replacement of fund allocation by credit in capital construction is nothing more than the changing of the funds supplier, as the direction of the investment is still determined by the planning decision-makers. If we compare the results of projects invested by the financial administration and projects funded with bank credit, it is difficult to decide which has better results. Also, under conditions where prices are irrational and the funds market is not developed, there are many processing industry projects and few basic industry projects funded by the banks which are under local planning controls, and this puts more pressure on the financial administration to invest in basic industries. Thus, the financial administration cannot reduce its expenditure as a result of the change from fund allocation to credit, and in fact its responsibilities are heavier. Facts over the last few years verify this.

In a situation where regulation by market mechanism already plays quite a role, the reducing of taxes by the financial administration and the allowing of enterprises to retain profits has increased enterprises' vigor and raised economic efficiency. However, because the relationship between the central authorities and local authorities has still not been clearly set down, and there have not been major changes in the enterprise structural reforms, the results of reducing taxes and allowing enterprises to retain profits have not been too obvious. On the one hand, local, departmental and institutional units have levied too many charges and the actual level of profits retained by enterprises is far below the stipulated level. On the other hand, over 40 percent of retained profits become wage expenditure, which has led to wage inflation.

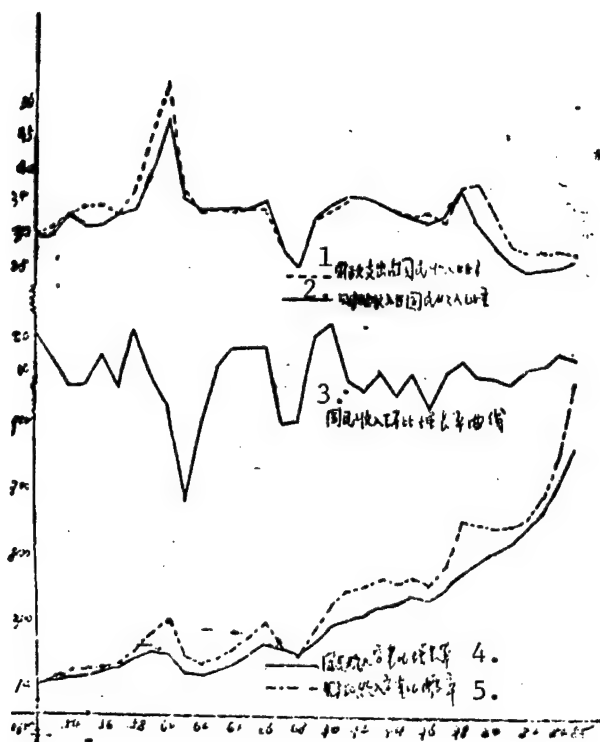
Of course, not all increased financial expenditure and reduced financial income resulting from the reforms is of low efficiency or without efficiency.

3. Appropriate expansion of demand and reduction of the financial deficit.

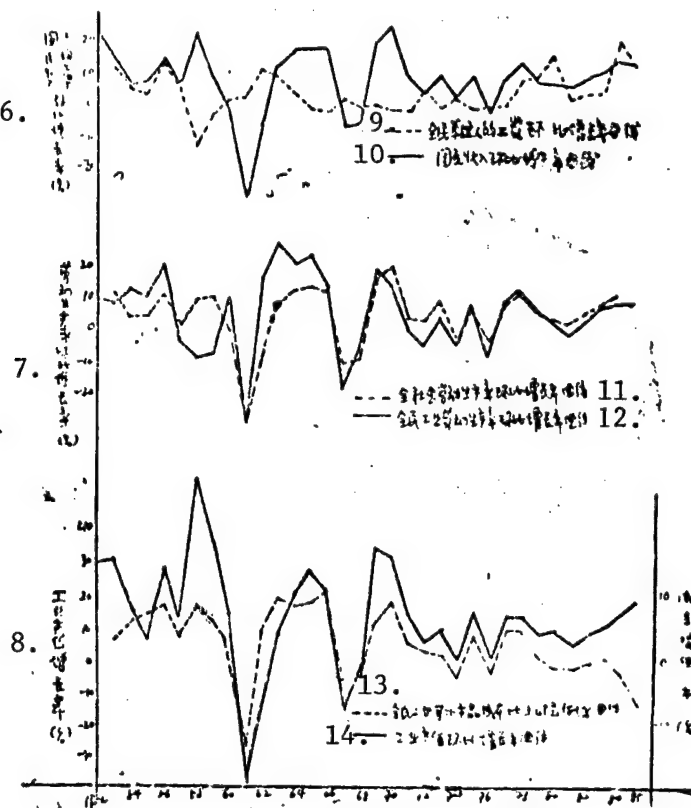
According to the above analysis, insufficient demand, leading to the low speed of economic growth in 1986 was a major cause of the financial deficit. Therefore, the appropriate expansion of demand is a policy which should be worth adopting.

4. An expenditure readjustment policy which goes against the economic trend.

Chart 1 shows that our country's financial expenditure policies have been of the type which accord with the economic trend. When the economy is growing, financial expenditure increases and when the economy is declining, financial expenditure is accordingly reduced. This adjustment policy not only cannot iron out economic cycles, but in fact causes greater fluctuations. When the economy is growing swiftly, the excessive demand for financial expenditure causes the economic growth rate to be higher than the potential growth rate. When the economy is in decline, the quite small financial expenditure demand will cause the economic growth rate to be lower than the potential growth rate. In order to reduce economic fluctuations, it might be considered changing the expenditure adjustment policies from a form which accords with the economic trend to a form which goes against the economic trend. Comrade Li Shuhe took part in the research into this question.



(图一) Chart 1



(图二) Chart 2

Key:

1. Financial expenditure as a proportion of national income
2. Financial revenue as a proportion of national income
3. National income chain growth rate curve
4. National income (two characters illegible) growth rate
5. Financial income (two characters illegible) growth rate
6. National income } chain growth rate (%)
7. Labor productivity chain growth rate (%)
8. Industrial output value growth rate (%)
9. Whole-people (four characters illegible) wage chain growth rate curve
10. National income chain growth rate curve
11. Total social labor productivity chain growth rate curve
12. Whole-people industrial labor productivity chain growth rate curve
13. Whole-people industrial comparable product cost compared to (two characters illegible) reduction (one character illegible) curve
14. Industrial output value chain growth rate curve

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CS0: 4006/895

ENTERPRISE OPERATING MECHANISM VIEWED

HK050315 Beijing BAN YUE TAN in Chinese No 13, 10 Jul 87 p 43

[Article by Fang Qi [2455 1142]: "What Is an Enterprise's Operating Mechanism?"]

[Text] The operating mechanism is an economic concept borrowed from biology, medicine, engineering, and some other sciences. In biology and medical science, mechanism generally refers to the structures and functions of an organism and the relations between them. The enterprise's operating mechanism refers to a variety of systematic functions and their interrelated relations within an enterprise which is like an organism, such as the planning, organization, command, supervision, coordination, and so on. These functions interact on one another within an enterprise.

The enterprise's operating mechanism generally consists of the following specific contents: The management operating mechanism, the self-motivation mechanism (which is also called the dynamic mechanism), and the self-restriction mechanism.

The management operating mechanism is the main part of the enterprise's operating mechanism and is generally concerned with scientific research and development, production, management, after-sales service, and various other kinds of enterprise operation. Therefore, in order to perfect the management operating mechanism of an enterprise, the enterprise should introduce the system whereby: The enterprise has decision-making power in its management and development; the enterprise becomes the independent or relatively independent economic legal person; the enterprise becomes the principal body of investment, and so on. This should perfect its organizational structure and organizational management structure.

The self-motivation mechanism is a mechanism which helps to improve the quality of the staff and workers contingent, arouse the enthusiasm of the staff and workers, and further strengthen the internal vitality of the enterprise. The self-motivation mechanism is generally concerned with personnel affairs, labor affairs, personnel training, staff and workers' wages, staff and workers' welfare, and other types of work in the enterprise. In order to perfect an enterprise's self-motivation mechanism, the enterprise should: introduce the system of training qualified personnel who are capable of working at both the grass roots and the higher levels, inside and outside the enterprise; implement

the principle of "to each according to his work" and the principle of fair distribution; and introduce some other factors. In carrying out personnel training and doing welfare work, the enterprise should not only pay attention to the overall training of personnel and improving of the general welfare for staff and workers, but also to training a selected number of better qualified personnel and to implementing the principle of rewarding some advanced personnel. Meanwhile, the enterprise should employ people according to their qualifications and actual abilities, and conditionally introduce some competitive factors when carrying out personnel training.

The self-restriction mechanism is the mechanism through which the enterprise accepts microscopic guidance from state policies and increase the social benefits [she hui xiao yi 4357 2585 2400 4135] and the enterprise's long-term economic results. The self-restriction mechanism is generally concerned with the form of the responsibility system, the decision-making method, the fund distribution method, the method of internal supervision, and some other factors. In order to perfect the self-restriction mechanism, the enterprise should introduce the system whereby enterprises: assume full responsibility for their own profits and losses; pay back loans after paying taxes; issue both wages and bonuses; link the social benefits of the enterprise with the long-term economic results targets; implement the "three regulations" and the responsibility system based on targets during the tenure of the factory director; perfect the internal economic responsibility system; and so on. Moreover, the enterprise should also strengthen discipline inspection, auditing, economic and technological proving, financial analysis, and other types of work.

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YANTAI IMPLEMENTS HOUSING SYSTEM REFORM

HK050309 Beijing RENMIN RIBAO in Chinese 3 Aug 87 p 1

[Article by reporter Gao Xinqing [7559 2450 1987]: "Yantai Reforms the Housing System on a Trial Basis"]

[Text] Yantai, 1 Aug--With the official approval of the State Council, Yantai's trial plan for reform of the housing system in cities and towns, characterized by "rent rises, ticket issuance, and idling start" and which is completed after 16 months of preparations, is being implemented on a trial basis today. This reform represents a crucial step toward the objective of commercializing housing. Yantai is the first city in the country to experiment in housing system reform. Its practice and experience is drawing people's great attention.

"Rent rises and ticket issuance" means raising at one go the current low rent to a standard monthly rent of 1.28 yuan per square meter of usable area, accounting for 83.7 percent of the cost rent, or over 680 percent of the original rent. Because of differences in housing quality, exposition, area, floor number, and internal facilities, a method of "standard rent plus or minus" has been adopted in rent calculation. The city's average practical monthly rent is 1.17 yuan per square meter of usable area. While raising the rent, the relevant authorities also issue housing tickets, according to the method of standard wages multiplied by ticket coefficient (namely, the proportion of newly-increased rent to average basic wages), to workers and staff members renting public housing, and then recover the housing tickets through rent payment. To reduce the increased work load and printing charges resulting from the issuance of tickets, they adopt an operational procedure of "using certificates instead of tickets in settling accounts." In this way, it will be unnecessary to issue housing tickets to workers and staff members.

"Idling start" refers to the method of "simultaneously leasing and recovering" old houses before the reform. The ticket-issuing units will only pay some expenses for reduced or exempted allowances instead of incurring new, considerable expenses, while the equity units will not get benefits either. Regarding new houses leased after the reform, the housing tickets issued to workers and staff members will be incorporated into enterprise cost and financial structure; with the exception of a portion to be used under overall arrangements, the rent received will belong to the equity units. Old houses, however, will gradually make a transition from idle operation to actual

operation by the raising of housing fund and its gradual incorporation into cost. This is called a benign cycle under which the old houses make an idling start and advances by a rolling method and the new houses exercise actual operations. For the time being, workers and staff members living in or renting private houses and single workers and staff members living in collective dormitories will not be subject to the reform. Thus, by acting within our capabilities it is possible to keep the reform within the financial capabilities of the state, localities, and enterprises.

Regarding households subject to increased expenses (households whose housing tickets are insufficient to pay the rent), by upholding the principle of "those occupying larger housing areas should pay more" and considering the practical capabilities of the individual households to stand the economic and psychological strains, we can also adopt, for a certain period of time, a method of reducing or exempting allowances in different grades according to per capita income and housing area. Those receiving higher wages and occupying larger areas will receive smaller allowances while those receiving lower wages and occupying smaller areas will receive greater allowances.

An important purpose of reforming the housing system is to sell houses. Yantai is adopting various preferential policies, measures, and methods to encourage residents to buy houses.

Yantai city is setting about instituting a housing fund system for the city, enterprises, and individuals. With the approval of the relevant authorities, the Yantai Housing Savings Bank has been set up to effectively organize the idle funds and housing funds in society for the construction and operations of commodity houses and to stimulate and quicken the pace of housing commercialization.

The reform of the housing system is an extremely complicated and arduous systems engineering project involving a wide range of areas. Yantai's experiences are: First, it is necessary to place this reform in an important position. The principal leaders should personally look into the matter and organize a leading group with the mayor as leader and the responsible persons of the five leading bodies and garrison units as members, as well as a strong working body. If they meet with difficulties and problems, they should "cut paths through mountains and build bridges across rivers" instead of skirting around the contradiction. Second, it is necessary to have a scientific approach and, through investigation and study, conscientiously carry out the basic work satisfactorily. They have conducted investigation in 380,000 households on different occasions, averaging 995 households a day, used computers to calculate 30,000 bits of data and, after repeatedly comparing a dozen plans or so, chosen the best plan conforming to the actual conditions in Yantai. After three all-round simulated operations were conducted, checked, and approved, contradictions were revealed and experiences gained. Third, since the reform involves every household and since the vast numbers of cadres and masses are the main body of the reform, it is necessary to consistently place the education and mobilization of cadres and masses in first place. Through numerous forms, such as making reports, delivering television speeches, and holding forums, the principal leading comrades of the city party committee

and government held direct dialogue with cadres at the grass-roots level and the masses and thereby deepened their understanding of the reform. It is particularly necessary to discard the welfare concept that housing displays the superiority of socialism, the hierarchy that housing reflects political treatment, and the consumption concept that housing should be excluded from personal nonproductive expenditure and to solidly foster the concept that housing is a commodity. Leading cadres and Communist Party members should take the lead in destroying the old and establishing the new with their exemplary actions and enthusiastically support the reform.

At present, a new trend has emerged in Yantai city. Those living in big houses are changing to small ones and those having no houses are buying new ones. People elatedly told this reporter: In the past, the malpractice of distributing houses was so serious that even party discipline and the law could not keep it under control. It has now been "cured" by economic means in this reform.

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CSO: 4006/895

RENMIN RIBAO ON REFORM OF HOUSING SYSTEM

HK050439 Beijing RENMIN RIBAO in Chinese 3 Aug 87 p 1

[Commentator's article: "Put Reform of the Housing System in an Important Position"]

[Text] Under the guidance of the State Council, Yantai City is the first to work out a trial plan for reform of the housing system. This represents a brave challenge to China's old housing system of "low rent, high allowances, a welfare system, and distribution of physical goods" characterized by unified state distribution.

China's urban housing problem is long-standing, big, and difficult. Since the founding of the PRC, the state has invested 176 billion yuan in residential housing construction in cities and towns. It has built dwelling places with a total floor space of over 1.3 billion square meters, most of which were completed in the 8 years between 1979 and 1986. But housing shortages have not been fundamentally alleviated. The number of households that have poor housing conditions, no house, or a house on the verge of collapse still accounts for 31.6 percent of the total number of households in the cities. Moreover, various malpractices have also caused much disparity in material well-being and artificial housing shortages. The difficulty of the housing problem lies in the serious defects of the old housing system. The nation's average rent is 0.13 yuan per square meter; in some cases, it is as low as 0.08 yuan per square meter. No wonder some people say: "A pack of cigarettes is equal to a month's rent." Such low rent makes it impossible to maintain even repair work and simple reproduction, still less to carry out expanded reproduction. Over the past dozens of years, we have practiced a method of the state and enterprises "taking care" of the urban housing problem. This method has seriously affected the vitality of the building and building materials industries and strangled the estate trade. It has also distorted the people's consumption pattern and behavior. Instead of placing personal nonproductive expenditure on the most urgently needed houses, people spend their money on refrigerators, washing machines, and color televisions, resulting in the emergence of this or that "craze" and the phenomena of lopsided and "overheated" consumption. Despite a per capita housing area of 3 square meters, some families have a colored television set on the bunk bed.

Since the old housing system has entered a blind alley, the practical conditions call for its reform. The experimental experiences gained in Yantai and other cities show that, by taking the change of low rent as a point of breakthrough and gradually achieving the commercialization of residential houses--that is, by gradually changing material distribution into currency distribution and allowing the residents to get houses through commodity exchange so that residential houses, which are long-standing durable articles, can enter the consumer goods market and a benign cycle of the input and output of housing funds can be realized--it is possible to bring along the overall situation and to open up a new path of resolving urban housing problems that has Chinese characteristics. When people turn their idea from "renting rather than purchasing houses" to "purchasing rather than renting houses," the consumption pattern tends to become more rational; because of increased market demand and input, the building and building materials industries will gain vitality and genuinely become an important pillar industry of the national economy.

The reform of the housing system is an important component of the reform of the economic structure as a whole. It involves not only rational adjustment of the consumption pattern and industrial structure but also urban transformation and the advance of enterprise reform, as well as the reform of finance, credit, wages, commodity prices, and social security. For this reason, reform of the housing system will certainly bring along all other aspects. This reform is so closely related to the direct interests of thousands upon thousands of workers and staff members that, if we succeed in it, we can enjoy the support of the majority of the people. The malpractice in housing distribution that has existed for many years will also be curbed once and for all. This will undoubtedly forge close relations between the party and the masses and between cadres and the masses. Therefore, we should lose no time in putting reform of the housing system in an important position. Like Yantai, we should conscientiously strengthen leadership, step up publicity and education, mobilize the cadres and masses, and make great efforts to grasp this work meticulously and satisfactorily and in a down-to-earth way. If we grasp this work earlier, we shall gain the initiative earlier; if we grasp this work later, we shall be in an increasingly passive position. The conditions in the country are very complicated. At present, we should step up experiments in selected cities and explore many feasible and concrete ways of reform. However, on major matters of principles and policies, we should uphold the unified basic principles and policies and conscientiously ensure that it will not get out of control on the macro level. On the basis of summing up experiences gained in urban experiments, we should work out overall planning and popularize them throughout the country by stages and in groups.

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GUANGDONG COMMUNICATIONS EQUIPMENT DESTRUCTION NOTED

HK190253 Guangzhou Guangdong Provincial Service in Mandarin 0300 GMT 18 Aug 87

[Text] Over the past few years, there have been serious cases of destroying or damaging communication installations in our province. From January 1986 to June this year, there were a total of 750 cases in this regard in our province including man-made destruction cases, destruction cases caused by outside forces [wai li], as well as cases of stealing and destroying communications equipment and installations. As a result, economic losses directly created by such cases reached 1.1 million yuan, and there were a total of more than 200 communication obstructions.

The major reason for our province's communication installations being damaged and destroyed is that a small number of units lack elementary knowledge. These units' blindness in action and their ignorance have contributed to the emergence of such cases. On 23 June this year, while carrying out the (Dabei) overpass construction work in Guangzhou, construction workers from the (Disanqiao) Tunnel Construction Company under the Guangzhou Railway Bureau indiscriminately carried out digging and excavation work, thus breaking off the Beijing-Wuhan-Guangzhou 1,800-route (zhong tong zhou) electric cable. Economic losses directly caused by this case reached 160,000 yuan. In addition, a number of lawless people have been recklessly stealing communication equipment and no prompt actions have been taken to crack down on such lawless people.

To promote security work concerning communication equipment and installations, departments of posts and telecommunications and public security departments at the provincial and city levels began yesterday on acting promptly to carry out the following tasks: to comprehensively publicize and implement the regulations promulgated by the State Council and the Central Military Commission on protecting communication circuits and lines; to reaffirm the existing decree that waste product collection units are not allowed to purchase the electric wires and other communication equipment sold by thieves; and to handle according to the criminal law all the criminal elements engaged in destroying post 1 and telecommunications circuits and lines.

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CSO: 4006/895

HUNAN EXTENDS PREFERENTIAL TREATMENT TO GUANGDONG

HK110738 Changsha Hunan Provincial Service in Mandarin 0000 GMT 11 Jul 87

[Text] According to HUNAN RIBAO, a Hunan economic and technological delegation arrived in Guangzhou yesterday. Governor Xiong Qingquan is leader of the delegation, and the deputy leaders are Huang Daoqi, vice chairman of the provincial people's congress standing committee, and Vice Governor Yu Haichao. At 1000, Guangdong Governor Ye Xuanping, provincial party committee standing committee member Liu Weiming, and Vice Governor Kuang Ji received the Hunan delegation at the Guangzhou Hotel. In the afternoon, Xiong Qingquan, Huang Daoqi, and Yu Haichao met representatives of the Guangdong media. On behalf of the provincial government, Xiong Qingquan announced 20 preferential treatment policies for Guangdong in cooperating with Hunan:

1. The profits from enterprises set up in Hunan by Guangdong as joint ventures with Hunan will be distributed in proportion according to the amount of investment. Hunan can concede 10 percent or a bit more of its own profit.
2. The loans for such enterprises will be repaid before tax from the increase in profits. Tax will only be levied after loans are repaid and profit distributed.
3. In the case of technological improvement and transformation projects in such enterprises, the size of Guangdong's investment will be Hunan's affair and the output value will be Guangdong's affair. Special consideration will also be given to Guangdong in local tax levies.
4. Dividends will be paid according to share-holdings in the case of Guangdong taking up shareholding in technology, trademarks, and patents in Hunan.
5. Guangdong participation in projects in old revolutionary bases, minority-nationality areas, remote and poor areas in Hunan, and projects jointly operated by the two provinces for developing energy and communications will be exempt from tax for 3 to 5 years.
6. Guangdong will receive preferential treatment regarding the proportion of resources and materials in short supply for which it engages in joint ventures in Hunan.

7. New products of joint ventures run in Hunan by the two provinces will enjoy Hunan's preferential treatment and tax-exemption policy.

8. Labor costs for cooperation projects established by the two provinces in Hunan for processing materials supplied by foreign businessmen, processing according to buyer's samples, or assembling parts supplied by outsiders, and running compensation trade can be 20 to 30 percent less than in Guangdong.

9. Preferential treatment arrangements for accommodation and transport will be made in Hunan for domestic or China Travel Service tourist groups organized in Guangdong.

10. Preferential pay and conditions will be provided for Guangdong scientific and technological management personnel and technical workers who come to support Hunan's construction.

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CSO: 4006/891

SUCCESS CLAIMED IN LATERAL ECONOMIC TIES

HK170213 Hong Kong ZHONGGUO XINWEN SHE in Chinese 0457 GMT 15 Aug 87

[Report by Sun Yongliang (1327 3057 5328): "Zhang Yanning Says Lateral Economic Ties Are a Major Content of China's Economic Structural Reform"--ZHONGGUO XINWEN SHE headline]

[Text] Beijing, 15 Aug (ZHONGGUO XINWEN SHE)--In an interview with a ZHONGGUO XINWEN SHE reporter, Zhang Yanning, a deputy minister of the State Economic Commission, said that China had so far established 32,000 economic associations of various types and that there were 24 transregional networks of lateral economic ties in the country.

Zhang Yanning said: In recent years, an important part of China's economic structure reform--economic and technical cooperation between regions and joint undertakings run by enterprises--has developed rapidly, and breakthroughs have been made regarding the substance and form of these joint undertakings. By the end of 1986, the number of new economic associations, with industrial enterprises at the country level or above as their core members, had reached 6,832, with a total membership of 15,740 industrial enterprises, and these associations had absorbed 11 billion yuan of investment.

Presenting the most up-to-date data, Zhang Yanning said: Since 1986, lateral joint undertakings in China have yielded the following results:

--Joint undertakings can now take many forms, their scope is expanding, and they have yielded remarkable economic results. Since March last year, when the State Council promulgated the "Regulations on Certain Questions Concerning the Further Development of Lateral Joint Economic Undertakings," lateral joint economic undertakings have been developing. From production, which was their starting point, they have now entered the areas of circulation and science and technology; their operations have expanded from simple production operations to operations involving a combination of such key elements of production as capital, technology, information, personnel, and so on; these joint undertakings have developed from bilateral undertakings involving enterprises in the same trade to joint undertakings involving enterprise communities or enterprise groups, which are formed by large numbers of enterprises; and short-term and loosely organized joint undertakings have been replaced by stable and well organized joint undertakings. According to a statistical report, between January and November 1986, the industrial output value of the

new joint economic undertakings organized by the country's joint economic undertakings with their own capital went up by 40 percent, their profits increased by 20 percent, the output value of those economic joint undertakings which mainly provide technological and technical service rose by 40 percent, and their profits increased by 21 percent.

--The incorporation of science and technology into production is another important feature of lateral economic ties. The "intermarriage" between research institutes and institutions of higher learning on the one hand and enterprises on the other has shortened the process by which research results are turned into commodities. By the end of 1986, the total number of research-production joint organizations in China had reached 10,000. Some research institutes have been incorporated into some large and medium enterprises and enterprise groups. As a result, large joint enterprises in which research is integrated with production and production with development have come into existence.

--Lateral economic ties between communications and transportation enterprises have further developed. The country now has more than 200 joint transportation companies at or above the country level, with service centers in and networks covering more than 2,000 cities and towns. Six provinces along Chang Jiang and one city on it have established more than 60 shipping enterprises. In addition, the country is also trying to integrate railroad transportation with international container shipping.

Commenting on this development in China, Vice Minister Zhang Yanning said: The lateral economic ties have had an impact on the old close and yet divided economic management system and contributed much to deepening the economic structural reform.

Today, there are more than 1,000 enterprise groups in China. Seven large enterprise groups, including the "First Auto Plant" and the "Second Auto Plant," have secured the right to have independent plans. Lateral economic ties have contributed much to making the organization of enterprise groups and enterprise communities that can help China make its production setup, product mix, and, in particular, the organization and structure of its enterprises rational.

Lateral economic ties facilitate the working of the market mechanisms. Through these lateral economic ties, some enterprise groups have established sales networks, wholesale systems with cities as centers, and large conglomerate commercial groups (commercial associations), thus making a new breakthrough in the old economic structure, which is characterized by a divorce between departments and regions at different levels and between the urban and rural areas.

Zhang Yanning thought that: Although the development of lateral economic ties have drawn much attention, it is still restricted by some obstacles. The management system in the old economic structure, which is characterized by a

divorce between departments and regions at different levels, still remains an obstacle to the development of the lateral economic ties.

Zhang Yanning pointed out that for some time in the future, the country will concentrate its energy on encouraging the integration of the development of science and technology with production, on the establishment of economic ties that are characterized by the production of quality products and famous brands of products, on the establishment of ties between raw materials production enterprises and raw materials processing enterprises, and on the integration of industry with trade. In addition, it will continue to develop the lateral economic ties between regions and will try to turn these ties into an important means of facilitating the development of the socialist commodity economy and into being indispensable to it.

Zhang Yanning revealed that apart from further developing lateral economic ties, the country is now studying relevant policies and trying to define them. It will continue to encourage communications and transportation enterprises to organize combined transport and associated operations, to encourage enterprises in ordnance industry to establish ties with civilian enterprise, and to facilitate the establishment of ties between industrial enterprises on the one hand and commercial and trade enterprises on the other. It also will formulate relevant measures for organizing enterprise groups, for approving their formation, and for managing them, in order to enable them to gradually conform to certain norms.

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COUNTERMEASURES AGAINST RISING PROTECTIONISM

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[Article by Xue Rongjiu [5641 2837 0036]: "The Causes of Protectionism and How to Deal With It"]

[Text] Neo-protectionism appeared in the mid-1970's, began spreading from 1977 onward, and was given a boost during the severe economic recession which gripped the world in 1980-82 when international currencies were seriously out of step with one another. Undiminished by the economic recovery that began in 1983, neo-protectionism has become a threat to the normal development of international trade.

Faced with the challenge of neo-protectionism, what countermeasures should China take? This is what this article is concerned about.

The Characteristics and Danger of Neo-protectionism

What accounts for the "neo" in neo-protectionism ? What are its characteristics? They can be summed up as follows:

First, more and more commodities have come under protection, from traditional industrial and agricultural products to high-grade industrial goods and labor services. In 1977, the European Economic Community [EEC] stiffened restrictions on textile imports and the U.S. and Canada imposed limits on footwear imports. From 1977 to 1979, the U.S., France, Italy, and Britain restricted the entry of color televisions. Since 1980, the U.S. has curbed automobile imports from Japan, forcing the latter to "voluntarily" restrain its car exports to a quota of 1.68 million units. Subsequently, Canada and the Federal Republic of Germany [FRG] have taken similar measures to reduce car imports. In 1982, the U.S. reached an agreement with the EEC under which the Europeans would voluntarily limit steel exports to the U.S. In August 1986, the International Multifiber Arrangement [MFA] further tightened textile imports by expanding the scope of restricted commodities from cotton and synthetic fibers to cotton ramie and cotton silk blend textiles. "Agricultural wars," "auto wars," "aircraft wars," "semiconductor wars" and other trade wars occur frequently. High-tech products like mainframe computers and semiconductors have also come within the reach of protectionism.

On 27 March 1987, the U.S. decided to levy a 1 percent tariff on a portion of Japanese electronic and electrical products.

Second, protectionist measures are diversified and institutionalized. 1) Research into effective tariffs has been stepped up and more and more tariffs have been imposed. "Anti-subsidy" and "anti-dumping" taxes have proliferated. In 1984-85 alone, as many as 193 anti-dumping and anti-subsidy investigations were initiated by developed nations. During 1980-85, 283 "anti-dumping" cases were filed by developed nations against 44 nations. 2) Non-tariff barriers are being put up endlessly. From a little over 800 in the late 1970's, non-tariff barriers have grown to more than 1,000 to date. Non-tariff barriers with a major influence on the development of international trade consist mainly of the following: import quotas, tariff quotas, "voluntary" restraints or quotas, state trading, legislation requiring the purchase of domestic materials, expanding the monopoly of state-trading enterprises or that designated by the state, customs administrative procedures, technical or health quarantine and safety standards, barter trade, reciprocal trade, bilateral weapons trade, joint production agreements, offsetting agreements (under which a weapons manufacturer agrees to purchase spare parts from the other party or to build a production plant in the other party), performance regulations for foreign investors (specifying export goals, domestic contents, and the use of local labor), import ban or embargo, unconditional import authorization, qualified import authorization, price differential tax, minimum price system, "voluntary" export price restrictions, seasonal tariff, government admonitory measures (through price and quantitative investigations, the government may supervise or delay imports), official actions or measures of a threatening nature, and restrictive commercial practices. 3) Even more subtle are import restrictions that take the form of "voluntary" import restraints, "orderly marketing arrangements," "managed trade," and "organized free trade," resulting in a collection of "grey area measures" that bypass the General Agreement on Tariffs and Trade [GATT]. According to statistics compiled by the secretariat of GATT, over 90 percent of the import-restricting agreements in recent years were concluded outside the purview of GATT. Bilateral arrangements worked out in the grey areas have topped 120. Of them, voluntary export restraints and orderly marketing accords have become the main protectionist tool of discriminatory treatment.

Third, in nation after nation, as measures increase to encourage exports financially, institutionally, and morally, the focus of the "reward exports and limit imports" policy has shifted from restricting imports to encouraging exports. These measures include: 1) establish an umbrella coordinating agency to intensify the scrutiny of export policies, the export system, and measures aimed at stimulating exports; 2) commend manufacturers that do well in export by awarding them certificates of merit, banners or medals and building up their public image; 3) encourage exports by cutting or waiving taxes, providing subsidies, exempting exports from the relevant domestic taxes, reducing taxes on earnings generated by exports, allowing accelerated depreciation, etc., to reduce or delay tax payments, subsidizing export products and the development of export markets; 4) promote exports with fiscal measures. Establish an import-export bank and other specialized financial agencies to provide export manufacturers with preferential export credits. The central bank may offer low-interest discount rates to export bills of exchange. Government financial

agencies may guarantee loans to exporters or subsidize the interest rate of such loans. Export enterprises may be favored in the distribution of foreign exchange; 5) provide export insurance in the form of "general export insurance," "export loan insurance," "insurance for changes in exchange rates," and "export promissory note insurance." Such insurance may be offered by a government agency, a special insurance organization set up by the government, or a private insurance company under contract with the government; 6) nurture export enterprises and export trading companies; 7) employ legal and other means to maintain orderly exports. Encourage the creation of export cartels and prevent excessive competition among manufacturers; 8) vigorously establish export processing zones to launch an export drive; 9) when attracting direct foreign investments, pay attention to the encouragement of exports by offering preferential treatments in such things as taxes and finance to foreign investors who propose to build predominantly export-oriented projects; 10) use foreign aid to help promote exports; 11) step up export inspection and enhance competitiveness. Avoid selling shoddy products overseas to protect the reputation of domestic exporters. Work to achieve a stable market; 12) establish a special market research institution to provide exporters with informational services; 13) heads of government personally go out to promote products; 14) amend legislation to simplify export procedures, etc.

Fourth, there has been a shift from protection to a more systematic system of trade management. To begin with, as the governments of developed nations involve themselves more and more in managing trade, protectionist measures have been continuously broadened and adjusted and are now an important part of their foreign trade systems. Take, for instance, U.S. moves to protect its steel industry. To limit steel imports, it has taken a variety of measures including those aimed at disrupting and limiting trade, imposed anti-dumping and anti-subsidy taxes, and instituted a "trigger price" mechanism, culminating in legislation establishing a steel trade management system, namely the steel import stabilization provision in Article 8 of the Trade and Tariff Act of 1984. Under this law, foreign steel imports were limited to 17 to 20.2 percent of the U.S. steel market, which was to be achieved through voluntary restraint agreements negotiated between the U.S. and nations exporting steel to it. In late 1984, the U.S. and seven steel-exporting countries concluded a 5-year voluntary restraint accord. Second, foreign trade policy is increasingly being written into law to give protectionism a legal basis. In Western nations, legislation regulating foreign trade, formerly specific legislation, has now become a cohesive body of laws which centers around foreign trade legislation and is coordinated with other domestic legislation. In the U.S., foreign trade statutes have reached 1,000. Since 1980, developed nations have been increasingly active in passing laws on foreign trade. On 30 October 1984, the U.S. President signed into law the Trade and Tariff Act of 1984. Earlier, in September, the EEC approved a new trade law designed primarily to enable the EEC to respond promptly and effectively to "unfair trade practices" by other nations. On 1 December the same year, Canada began enforcing its special import law that simplified and expedited the processing of "anti-dumping" and "anti-subsidy" cases.

Neo-protectionism has made inroads on the open multilateral trade system and adversely affected the normal development of international trade.

First, there has been a continuous expansion in the scope of protectionism. During 1980-1983, restricted products came to account for a significantly rising portion of all imported manufactured goods, from 6 to 13 percent in the U.S. and from 11 to 15 percent in the EEC. In 1983, restricted commodities accounted for 30 percent of all manufactured goods consumed in developed nations, up from 20 percent in 1980. From 1968 through 1983, the number of non-tariff barriers affecting steel, automobiles, motorcycles, and footwear soared fourfold. In 1973, discriminatory restrictions imposed on cars by the entire Organization for Economic Cooperation and Development [OECD] amounted to less than 1 percent, compared to 50 percent in 1983. (Footnote 1) ("The Costs and Benefits of Protectionism," in "Observe," OECD, September 1985) From 1981 to 83, non-tariff barriers were instituted 2,486 times by 16 developed nations. (Footnote 2) ("The Impact of Non-tariff Barriers on the Imports of Developed Nations," in "World Bank Economic Review," September 1986) In 1983, 30 percent of the exports of Japan and other newly industrialized nations were subject to discriminatory restrictions, up from 15 percent in 1980. In 1986, 22.7 percent of the non-fuel imports of developed nations were the target of non-tariff barriers, up from 19.6 percent in 1981. (Footnote 3) ("Report of the Secretariat of the United Nations Conference on Trade and Development [UNCTAD], 2 March 1987.)

Second, protectionist measures have distorted the flow of trade. Quantitative restrictions have affected the nature of commodity trade and changed the geographical distribution of imports. To get around quantitative restrictions, exporting nations are hard at work trying to expand the market for the groups of commodities subject to restrictions, thereby boosting the value of trade without increasing the quantity. Because of "voluntary" restraints, Japan has increased luxury car exports to the U.S. by 13 percent. Changes in the lineup of nations and product mix resulting from protectionism have defeated the purpose of limiting imports. Under pressure from domestic manufacturers, some governments have lengthened the list of nations and products subject to restrictions. Under the first MFA (1974-77), for instance, the U.S. had bilateral agreements with 19 nations, none of which specifically restricted the import of so-called "sensitive items." Under the second MFA (1978-81), however, bilateral agreements between the U.S. and 7 nations included specific restrictions targeting those items. Under the third MFA (1982-85), the number of countries thus restricted rose to 14. During the same period, 43 nations entered into bilateral textile accords with the EEC, up from 33, while the number of restricted categories of products climbed from 23 to 48.

Third, trade restrictions have pushed up prices. Discriminatory quantitative restrictions exert price inflationary pressures on protected markets. First, nations and regions subject to most restrictions are also the least costly producers. Second, price increases in imported products act as an important "price umbrella" for the manufacturers of similar kinds of products. As protectionism gains ground, imported products become less and less effective in offsetting rising prices so that pressures build up for price increases. As a result of the second MFA, for instance, the average retail prices of clothing rose 20 percent in Britain; for lesser-quality products, such as overalls, the jump ranged from 30 to 50 percent and, in the case of highly labor-intensive items like children wear, prices soared 200 percent. Owing to

"voluntary" export restraints, the average prices of Japanese cars exported to the U.S. were significantly higher than prices in the pre-voluntary restraints era. An imported Japanese car cost \$185, \$359, and \$831 more in 1981, 1982, and 1983, respectively. During the same period, the increase in the sale price of a domestic car rose from \$78 to \$660, forcing American consumers to pay more and driving more and more of them to the used-car market.

Fourth, import restrictions have been ineffective in protecting jobs. Neo-protectionism was fueled by sluggish economic growth and high unemployment in the late 1970's. But the fact is that import restrictions have had only minimal effects in saving jobs in the protected sectors. First, even for industries where international competition is very keen, trade has only a minor role in determining the level of employment. Second, because of shifting trade direction, discriminatory restrictions have a certain restrictive effect on the overall volume of exports. Also, there are limits to the scope of import substitution. For these reasons, import restrictions have a lesser impact on job protection than changes in the macroeconomy. For instance, from April 1981 through late 1982, voluntary car export restraints by Japan created less than 22,000 jobs in the U.S., while more than 10 times that number of jobs were wiped out in the American auto industry because of the recession in the same period. According to a British study, assuming on-going low demand, productivity gains in the British textile industry will cut the labor force by 40 percent between 1983 and 1997, compared to 7 percent the reduction in jobs that the abolition of MFA is expected to bring. Finally, jobs-creation ability in the protected sectors will be neutralized by unfavorable macroeconomic consequences. Changes in price and wage behavior resulting from protection will threaten the effectiveness of macroeconomic policies and create a demand for tighter currency and fiscal policies. Protection will also lead to currency appreciation and have a depressing effect on overall exports, thus affecting employment in other sectors.

Fifth, developed nations have paid a heavy price for neo-protectionism. Take agricultural products, for example. Developed nations' farm support and farm trade policies have not only hindered foreign suppliers and disrupted the flow of trade, but also led to huge surpluses in sugar, meat, cereals, milk and other products. To hold down ever-rising storage costs and prevent deterioration and waste, the countries have been subsidizing export price to help find foreign buyers and put up import barriers on agricultural products, the severity of which varied with the degree of processing. All this has been costly to these nations. Between them, the U.S., the EEC, and Japan have spent a total of \$42 billion on farm support programs and export subsidies.

Sixth, neo-protectionism has hurt developing and socialist nations. First of all, they are more vulnerable to non-tariff barriers than developed nations. In 1986, 21.2 percent of all non-fuel imports by countries with developed market economies were subject to non-tariff barriers, up from 17.2 percent in 1981. Corresponding figures for developing and socialist nations were 26.2 and 25.3 percent, and 33.3 and 30.9 percent, respectively. Nontariff barriers imposed by developed nations hit manufactured goods, textiles, and apparel from developing and socialist nations much harder than similar products from other developed countries. Please see the following table.

Second, restrictive commercial practices are highly unfavorable to trade development by developing nations. Restrictive commercial practices refer to measures taken unilaterally by an enterprise to obtain or strengthen a market monopoly or a "dominant position," or they may be measures taken in conjunction with other enterprises supplying similar products or services in order to inhibit competition. A few developed nations are resorting to restrictive commercial practices more and more, directly and otherwise, as a protectionist tool.

Table 1 Impact of Nontariff Barriers Imposed By Developed Countries: A Comparison by Category of Exporting Nations (%)

<u>Trading Partners</u>	<u>All Non-fuel Products</u>		<u>Manufactured Goods</u>		<u>Textiles & Apparel</u>	
	1981	1986	1981	1986	1981	1986
Overall	19.6	22.7	18.6	20.5	54.8	55.8
Developed Nations						
with Market Economies	17.2	21.1	15.4	17.8	21.3	28.2
Developing Nations	25.3	26.2	31.3	31.0	71.8	73.4
major manufactured-goods						
exporting nations	28.3	28.9	31.3	30.0	76.5	76.7
least developed nations	12.4	12.1	28.0	27.2	36.5	35.2
other developing nations	23.0	24.2	31.5	34.6	64.7	68.9
socialist nations	30.9	33.3	41.3	43.0	74.5	75.2

Source: Report of the UNCTAD Secretariat, 2 March 1987

Moreover, protectionism has worsened developing nations' debt burden by affecting their exports. It is estimated that if only developed nations reduce tariff and nontariff barriers on such products as meat, sugar, wheat, and corn, developing nations can export an additional \$9.6 billion worth of exports. (Footnote 4) ("Commodity Survey 1986," a report by the UNCTAD Secretariat, Chinese edition, p 57) As a result of falling exports, debts have come to account for a rising share of the exports of developing nations, from 15-16 percent in the 1970's to 24 percent in 1982-83.

Seventh, neo-protectionism is reduce and will continue to reduce the gross domestic product [GDP] of both developed and developing nations. It has been estimated that mounting protectionism in OECD nations, which is equivalent to raising tariffs by 15 percent, will lead to a substantial drop in the GDP of developed and developing nations alike. Moderate-income oil-importing developing nations will experience a 3.5 decline in GDP, while developed nations will suffer likewise for a similar reason. (Footnote 5) ("The Costs and Benefits of Protectionism," in "Observer," OECD, September 1985)

Reasons for the Rise of Neo-protectionism

The appearance of neo-protectionism is no accident but has deep-seated economic and political reasons.

First, the economic recovery in the leading industrially developed nations in the 1980's has been less than robust and unemployment remains quite high. With the exception of 1 or 2 years, the average annual GNP growth rate of the entire developed world remains sluggish throughout the 1980's, below the 3.5 percent recorded in 1968-77, while unemployment exceeds the 3.7 percent rate of 1968-77 by a big margin, as illustrated in the following table:

Table 2 GNP and Unemployment in Industrially Developed Nations 1968-86

<u>All Developed</u>	<u>Average Annual GNP Growth (%)</u>		<u>Unemployment (%)</u>	
	<u>7 Leading</u>	<u>All Developed</u>	<u>7 Leading</u>	
	<u>Nations (1)</u>	<u>Nations</u>	<u>Nations (2)</u>	<u>Nations</u>
1968-77	3.5	3.4	3.7	4.0
1978	4.2	4.6	5.2	5.1
1979	3.4	3.4	5.1	5.0
1980	1.2	1.1	5.8	5.6
1981	1.4	1.6	6.8	6.5
1982	-0.4	-0.6	8.2	8.0
1983	2.6	2.8	8.7	8.3
1984	4.6	5.0	8.2	7.6
1985	3.0	3.0	8.1	7.4
1986	2.7	2.7	8.0	7.4

Notes: (1) (2) Canada, U.S., Japan, France, FRG, Italy, and Britain.

Source: "World Economic Outlook," International Monetary Fund, October 1986.

High unemployment is an important factor for the ascendancy of protectionism in developed nations. Since the late 1970's, slow economic growth in those countries and their diminished adjustment capacity (that is, the ability of a nation to provide new jobs for workers displaced by imports) have combined with declining worker mobility in the U.S. and Western Europe, for instance, to sustain the unemployment rate at a stubbornly high level. Serious unemployment has forced these countries to resort to protectionism.

Second, the foreign trade of the leading industrialized countries has developed unevenly. The soaring U.S. trade deficit has become the breeding ground of neo-protectionism. Since the mid-1970's, the U.S. trade deficit has deteriorated steadily. From \$32.1 billion in 1980, it burst through the \$100 billion mark in 1984 and hit \$170 billion in 1986. America piled up \$625.6 billion in total trade deficits between 1980 and 1986 when its deficits with Japan and the FRG jumped sharply. In 1980 its deficit with Japan was \$12.2 billion. By 1985, it had swelled to \$49.9 billion. During that period, Japan ran up a total trade surplus of \$157.4 billion with the U.S., or 34.5 percent

of the combined U.S. trade deficits for that period. Meanwhile, its deficit with the FRG rose from \$1.3 billion to \$12.2 billion.

A prime reason for the massive American trade deficit is that its productivity has not been growing as fast as that in Japan or the FRG. In the 1970's, average labor productivity expanded 1.8 percent annually in the U.S., far smaller than the 5.4 percent chalked up by Japan and the FRG, and even lower than France (3.4 percent) or Britain (3 percent). In the 1980's, productivity growth has picked up in the U.S., but it still lags behind its counterparts in Japan and the FRG. U.S. NEWS AND WORLD REPORT has done a comparative report on this issue. See table below.

Table 3: A Comparison of Workweek, Wages and Productivity in U.S. and Japan

		<u>Workweek</u> <u>(Hours)</u>	<u>Hourly</u> <u>Wages</u>	<u>Productivity</u> <u>Growth (%)</u>
	U.S.	40.3	12.59	27.3
All Manufacturing	Japan	41.9	6.35	107.9 (1974-84)
	U.S.	43.8	19.21	16.8
Automobiles	Japan	46.2	8.03	73.1 (1978-83)
	U.S.	40.8	20.28	13.8
Iron and Steel	Japan	44.0	9.65	16.4 (1978-83)
	U.S.	40.4	12.74	42.9
Electronics	Japan	45.1	5.45	52.2 (1978-83)
	U.S.	39.9	8.25	16.3
Textiles	Japan	44.7	4.65	28.1 (1978-83)

Source: "U.S. News and World Report," 9 September 1985.

As falling productivity saps American competitiveness, foreign goods replace domestic products and increasingly entrench themselves in the American market. Imports now account for a rising share of the U.S. market. Between 1980 and 1985, the U.S. market share of foreign-made apparel rose from 25 to 36.8 percent; footwear, from 51 to 77 percent; steel, from 18.9 to 26.2 percent; machine tools, from 21.8 to 37 percent; televisions, video cassette recorders, and cameras, from 61.6 to 72 percent; telephone instruments, from 11.7 to 40 percent; and car radios, from 22.7 to 45 percent. (Footnote 5) ("Newsweek," 9 September 1985). It should be noted that America is even losing its superiority in agricultural and high-tech trade.

After World War II, agricultural products have always been a major source of foreign exchange earnings for the U.S., its surplus in agricultural trade

substantially offsetting its trade deficit in other areas. In the 1980's, however, as imports expanded and exports shrank, America's agricultural trade surplus fell from \$22.5 billion in 1980 to \$7.6 billion in 1985. In high-tech trade, America is also losing its edge. As its high-tech exports fail to grow as rapidly as its imports, America's trade surplus has been slipping from \$26.7 billion in 1980 to \$3.6 billion in 1985 and actually turned into a \$1.3 billion deficit in the first half of 1986. Please see the following table.

These are the major reasons behind the erosion of America's leadership in high-tech trade: increasing shortage of certain science and engineering technology; low managerial standard; the overseas transfer of technology by multinational companies; the over-concentration by publicly-funded research and development on the narrow field of defense and space navigation.

Table 4: Agricultural and High-Tech Trade Balances of the U.S. 1980 - Jan-June, 1986 (\$ billions)

	1980	1981	1982	1983	1984	1985	1986 (Jan-Jun)
Agricultural exports	41.3	43.3	36.6	36.1	37.8	29.6	13.3
imports	18.8	18.6	17.0	18.1	21.6	22.0	12.1
balance	22.5	24.7	19.6	18.0	16.2	7.6	1.2
High-tech exports	54.7	60.4	58.1	60.2	65.5	68.4	35.2
imports	28.0	33.8	34.5	41.4	59.5	64.8	36.5
balance	26.7	26.6	23.6	18.8	6.0	3.6	-1.3

Source: Table 304 in "International Economics," No 6, 1986.

To trim its trade deficit, the U.S. has been pressing Japan and other nations with which it has huge deficits to open their markets, on the one hand, and stepping up restrictive and retaliatory import measures and frequently waging all kinds of trade wars with Japan, etc., on the other.

Third, dislocations between the world's currencies. Longstanding exchange-rate imbalances have affected the normal development of international trade and created immense protectionist pressures. First, floating exchange rates have forced traders to purchase futures and hedges against inflation, thereby increasing business costs and leading to changes in prices, investment returns, and competitiveness. Second, when a currency is either overvalued or undervalued, protectionist pressures tend to build up. That the dollar is overvalued is an important reason why protectionism has made headway. Since the 1960's, the three periods when U.S. protectionism reached a peak happened to be just the times when the dollar was overvalued. The first period lasted from the late 1960's to 1971 when the dollar was overvalued by about 20 percent, leading to even more stringent restrictions on textile and steel imports. In the second period, from 1975 to 1976, the dollar was overvalued by 15 percent (corrected in 1977-78) and the U.S. instituted a "trigger price" mechanism for steel imports, coupled with other protectionist measures. After 1980, as the dollar became overvalued, strong protectionist pressures re-emerged. From 1980 to 1984, the dollar rose an average 18 percent in value

against the currencies of 18 other industrialized nations. The upshot was expensive U.S. exports and cheap imports. To compete with foreign-made goods, U.S. producers were forced to slash their profit margins and cut back on earnings. Hence their endless complaints and demands for restrictions on foreign imports to members of Congress.

Fourth, political needs. High unemployment, the clout of labor unions, party struggle, and the need to preserve the government's image have greatly intensified protectionist pressures. In the U.S., for instance, the strongest impetus for protectionism comes from the textile industry. This industry and its unions have enormous "lobbying" capability in Congress. Of the labor force in the entire manufacturing sector in America, about one tenth is employed in the textile and related industries all over the nation. Most cotton textile plants are in the south, their products are shipped to various northern states to be processed into garments, and raw materials for the textile industry come from farms in the Southwest. Thus Jenkins declared, "Geographically this gigantic labor force constitutes a mighty political alliance." To win the Senate election and general election in 1986 and 1988, respectively, the Democratic Party has added fuel to the protectionist flames. Many textile workers believe the Democratic Party looks out for their interests and is willing to pass laws to give them more job opportunities. That the Democratic Party captured the Senate in the 1986 election reflected to a certain extent protectionist sentiments in America.

Fifth, interactions between different trade policies. As world economic interdependence increases, a trade policy becomes more and more sensitive to other trade policies. If the economic and trade relationship between two nations is lopsided, the injured party often resorts to restrictive measures to restore the balance and get back at the other side. Since the mid-1970's, the targets of retaliation of the U.S. have been Japan, Canada, and a number of newly industrialized nations and regions.

After WWII, the U.S. enjoyed a huge trade surplus, its GNP accounting for a significant share of the output of the world, and it was relatively immune from the repercussions of foreign economies. All this made the U.S. the leader of the capitalist world. Out of foreign policy considerations, the U.S. supported European economic integration and was even willing to give up part of its export markets. In the 1950's and 60's, America tolerated the highly protectionist policies of Japan and developing nations. By 1970, its hegemony of the world economy having come under challenge, America was losing its authority as a leader. It thus became the major objective of American foreign economic and trade policy to secure "fair trade" opportunities for American exporters. Subsequently, the U.S. has taken many protectionist measures only to encounter retaliation, overt and otherwise, from other nations, which fed the rise and growth of neo-protectionism.

Impact of Neo-protectionism on China's Foreign Trade and Countermeasures

Neo-protectionism is unfavorable to the development of China's foreign trade in the following ways:

First, it militates against the export of large-scale Chinese commodities. Light and textile industrial products have consistently made up 30 percent of Chinese exports and remain the mainstay of this nation's export drive in the Seventh 5-Year Plan. But Chinese textile exports are increasingly subject to quota restrictions: 1) developed nations have slapped more restrictions on textile products. Take, for instance, the U.S. From a little more than 30, the number of restrictions imposed by the U.S. on textile imports has risen to 60; 2) more and more categories of products have been put under restriction. Textile products now under quota have been extended from cotton and synthetic fibers to cotton ramie and cotton silk; 3) growth rate reduced. According to the International Textile Trade Agreement, "if the restrictions remain effective in the next 12 months, the level for that period shall not fall below the level set for products subject to restrictions in the previous 12 months and must not increase less than 6 percent. (Footnote 6) ("International Textile Trade Agreement," Appendix 2) In bilateral textile negotiations, however, developed nations try their best to minimize the above ratio. The U.S. has reduced it to 1.5-2.5 percent, while some nations have rejected a 6 percent growth; 4) reduce and eliminate "flexible provisions." So-called flexible provisions determine the ratios of quotas that can be borrowed or reserved. The International Textile Trade Agreement stipulates that "after consultations between the signatory states concerned, the total restricted level in effect for more than 1 year for one product or group of products may be exceeded in either one of the following 2 years through the borrowing or reservation of quotas. The margin is 10 percent, or 5 percent in the case of quota borrowing." In bilateral textile trade negotiations, every nation tries to limit to the utmost the borrowing or reservation ratio provided for by the agreement; 5) more and more nations are imposing restrictions. The U.S. and the EEC have been joined by Canada and northern European nations in imposing quota restrictions on Chinese textile exports.

Second, Chinese exports have been the target of increasing "anti-dumping" complaints. From 1979 to 1985, the U.S., EEC, Australia, and other nations filed almost 60 "anti-dumping" complaints against China. Of these, the U.S. accounted for 14 (including 6 in 1985 alone.) Among the commodities involved are natural bristle paint brushes, cast iron products, iron nails, paraffin candles, small-diameter, standard welded steel piped, and enamel cook-ware. The increase in "anti-dumping" charges against China by foreign producers is clearly detrimental to the nation's export effort. This is because it takes more than 1 year for an "anti-dumping" case to be resolved. In the meantime, skeptical importers take a wait-and-see attitude and dare not place substantial orders. If China loses the case, the foreign importer will be required to pay a higher "anti-dumping" tax, which may cut back on his profits or make the entire undertaking unprofitable. Subsequently he will take his business elsewhere. The inevitable result is a drastic drop in Chinese exports to that nation or even an exit from that market.

Third, more stringent health and quarantine standards. In the wake of advances in science and technology and testing capabilities, developed nations and regions have become more demanding in terms of the quality of Chinese exports. Among health and quarantine standards affecting Chinese exports are lead content requirements in chinaware and pesticide residues. For instance, the FRG barred Chinese meat exports from entering the country in 1983 because

of high levels of pesticides residues and serious biological contamination and revoked the licenses of 24 Chinese meat processing plants in the country (of which 7 have had their licenses restored).

Fourth, protectionism is unfavorable to China's effort to transform its export mix in two ways. The nation's strategic objective as an exporter is to bring about two changes--one, replacing primary products with manufactured goods as its mainstay exports and, two, shifting from simple processed products to multiple-processed goods. These two changes will be hindered by the ladder-shaped tax structure of developed nations where tariff rates go up as the extent of processing of imported goods increases: the more processed the item, the higher the tax rate. As we broaden our export drive of upscale, sophisticated, and high-grade products, we are bound to encounter ferocious competition from the producers of similar products in the developed nations. To protect their domestic markets, these nations must limit, not encourage, Chinese exports.

In short, neo-protectionism affects China's current export drive and constitutes a potential threat to its push for a new export mix. It must indeed be studied and tackled seriously. How should China deal with neo-protectionism?

First, the long-term nature of neo-protectionism must be fully grasped. Neo-protectionism is long-term mainly for the following reasons. The remainder of the 1980's and the first half of the 1990's will be a period of slow or moderate growth for the world economy and international trade; protectionist pressures (high unemployment, painful economic adjustment, agricultural protection policy, developed nations losing their comparative advantage) remain; America's foreign trade will stay unbalanced, and the eighth round of talks under GATT will be long-drawn-out. Neo-protectionism, therefore, will be around for a long time to come.

Second, we must distinguish clearly between the various elements of neo-protectionism and treat them differently. By and large neo-protectionism is of three kinds. The first kind, which is legitimate protection, refers to regulations stipulating health requirements and safety standards for imported goods. These regulations come about because of improvements in testing capabilities and are necessary to protect consumer health and safety. Examples include low-acidity registration, the lead content of chinaware, pesticide residues, toy legislation, etc. China's only response to this kind of trade protection is adjustment, not blind objection. It can only look within itself for a way to remedy the impact it may have on its export drive by making improvements. To oppose this kind of legitimate protection is to protect backwardness. The second kind consists of protectionist measures designed to capture a market, such as import quotas, "voluntary" restraints, permits, legislation mandating the purchase of domestic materials, "anti-dumping" and "anti-subsidy" taxes, etc. This type of trade protection is more complex and constitutes the mainstream of neo-protectionism. As such it is the primary target of serious research by all trading nations as they try to work out a way to deal with it. This kind of trade protection is discriminatory protectionism. The U.S. for instance, at one point made it a rule that tomatoes smaller than 2.5 inches in diameter be denied entry, thus

creating tremendous difficulties for Mexican tomato growers who export to the U.S. This was a discriminatory protectionist act. In the name of "protecting human rights," there are also moves afoot in America in recent years to prevent the import of goods made by "compulsory labor." The aim was to besmirch the name of and discriminate against socialist countries. The response to this kind of protectionist measures should be unequivocal rejection and opposition.

Third, a serious effort should be mounted to examine and resolve the quota and "anti-dumping" issues, the two major hurdles to expanding Chinese exports at the moment. As far as quotas are concerned, China may consider taking a three-pronged approach. First, increase the exports of products not subject to quotas to areas that do not impose quotas. As the Middle East and Latin America impose few quotas on textile goods, exports to those nations and regions may be augmented. Second, fight for more quotas in bilateral trade talks by stressing trade balance, closely tying China's exports to exports by the other side, and deliberately using imports to promote exports. In negotiating the import of large quantities of commodities, China should emphasize the granting of more quotas by the other side. It should also unite with other nations to strengthen their bargaining position in international trade talks and fight for high growth rates and the expansion and application of flexible provisions. Moreover, it must switch to high-grade products and increase the value of its exports without increasing the volume. As far as textile exports are concerned, there must be an end to the dominance of the two yarns and two cloths without delay. If the apparel industry has problems getting textiles, it may turn to processing with materials provided and processing with purchased materials. As for "anti-dumping" cases, China may consider tackling them in these ways: 1) try to prevent them from happening. "Anti-dumping" cases are filed against China because of the excessively low prices of its goods, for one thing. In 1984, Chinese candles exported to the U.S. sold for \$0.57 per lb., while candles from South Korea and Taiwan were priced at \$1.34 and \$1.08, respectively. Second, the export time frame is too compressed, exceeding what the domestic producers of similar products in the importing nation can bear. Accordingly, the prices of Chinese exports should be coordinated as much as possible to prevent price wars between exporting enterprises. Goods should be shipped abroad incrementally to ensure a stable supply and avoid a glutted market. In addition, it must keep track of any anti-dumping moves by the importing nations through all channels and work to resolve the problems in private instead of letting them out into the open; 2) seriously deal with the "anti-dumping cases" that are filed. When a foreign producer files a complaint against China, we should not panic, first of all. Second, we must handle it in earnest and wage a righteous and forceful tit-for-tat struggle against it. In general, China must contest a complaint. Otherwise, the importing nation has to rule solely on the basis of data supplied by the complainant and other materials in its hands, which is bound to be unfavorable to China. However, in a handful of cases involving really low-priced small commodities (that are marginally profitable and have little development potential) which it is certain China will lose, China may choose not to contest them. That way we save legal fees and avoid wasting money and manpower. On the other hand, we must go all out to win cases which we have decided to contest by taking the following steps: (1) retain experienced, prestigious lawyers. Chinese exporting companies should furnish the lawyer

with full data and materials and fill in all investigation forms under his guidance; (2) join forces with the importing company to put up a joint legal defense; (3) if the commodity in question is the product of a collective or individual-owned enterprise, China should do its utmost to have it treated as part of a "market economy" by the importing nation or, failing that, to have the enterprise of another nation with a producer price lower and close to China's declared as a "substitute economy;" and (4) when investigators arrive in China from the agency of the importing nation that handles "anti-dumping" cases, they should be received warmly. The enterprise under investigation should be fully prepared. 3) China should promptly review the cases it has won and lost and try to draw lessons from them. Of the 14 "anti-dumping" complaints American manufacturers have filed against it since 1980, China has won 3 and lost 6. Since there is much that can be learned from them, they should be examined carefully.

Fourth, step up investments abroad and develop multinational companies to surmount the tariff and nontariff barriers erected by importing nations.

Fifth, facing up to and resolving the major problems in its foreign trade is basic to China's coping with neo-protectionism. While it certainly affects the country's export drive, neo-protectionism is not the leading stumbling block to the development of foreign trade. China should transform protectionist pressures into the driving force of trade development. Even a stronger neo-protectionism will not be able to stop trade expansion if China seriously tries to improve its export mix, implement the various policies and measures made by the state to encourage exports, build up an export production system, strengthen and improve export marketing work, pay attention to the economic returns of foreign trade, press ahead with reforms in the foreign trade system, improve working style and efficiency, present a united front in dealing with foreign business, and obtain international market information and feedback.

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GUIZHOU HOLDS MEETING ON FAMILY PLANNING WORK

HK051247 Guiyang Guizhou Provincial Service in Mandarin 2200 GMT 4 Aug 87

[Text] A provincial conference on family planning work was held yesterday in Anshun City. In her speech summarizing our province's family planning work conducted during the first half of this year, Zhang Yuqin, provincial vice governor, stressed: We must strictly control our population growth rate and fulfill the state population plan formulated for our province.

Zhang Yuqin said: In family planning work, we must put the stress on controlling births not covered by the plan and particularly on controlling additional births. We must adopt effective measures to promote our family planning work.

During the conference, (Zhao Zhongrong), vice chairman of the provincial Family Planning Commission, passed on the important instructions on family planning work issued recently by Premier Zhao Ziyang, and also relayed the speeches on our province's family planning work delivered by Hu Jintao, secretary of the provincial party committee, and provincial Governor Wang Chaowen.

During the conference, Wang Zhenjiang, vice chairman of the provincial people's congress standing committee, explained in detail the Guizhou Provincial regulations regarding family planning for trial implementation, which will come into force on 1 January 1988.

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CSO: 4006/895

GUIZHOU CONCLUDES FAMILY PLANNING CONFERENCE

HK080411 Guiyang Guizhou Provincial Service in Mandarin 2200 GMT 7 Aug 87

[Excerpts] The provincial family planning work conference which concluded on 7 August stressed that the focal point in this work this year is to take remedial measures regarding pregnancies not covered by the plan and additional pregnancies, to ensure the fulfillment of the population plan.

This year the number of births in the province has shown an increase over the same period last year, rising to 12.85 per 1,000. Some 31,900 births represent additional births. In view of this, the conference demanded that the leaders of all localities and departments truly assign family planning work an important position and take effective measures to strictly control population growth. It is necessary to stabilize the policies, and refrain from granting exemptions beyond the limits set by the documents. Where such exemptions are arbitrarily granted in the future, it is necessary to hold accountable the leaders and those directly involved. Family planning work must be listed as an important content of building spiritual civilization, and the whole of society must be mobilized to be concerned for and support this work.

In a summation report, Vice Governor Zhang Yiqin called on the participants to seriously relay the spirit of the conference on returning to their units and take steps to implement it so as to produce results as soon as possible.

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CSO: 4006/895

CHANGES IN LAND OWNERSHIP

Beijing NONGYE JINGJI WENTI [PROBLEMS OF AGRICULTURAL ECONOMY] in Chinese No 7, 23 Jul 87 pp 20-24

[Article by Yang Jinglun [2799 4842 0243], Development Research Institute of the Agricultural Research Center of the State Council: "Changes and Innovations in the Rural Land System"]

[Text] In this article we shall discuss changes and innovations in the rural land system, primarily focusing on the agricultural (tilled) land system.

I. Changes in the Land System

Under the collective economy, the land system was characterized by its binary structure. First, the core of the land system was the unity of the right to occupy land and the right to use it, and of the principal owner and the principal operator, i.e., collective ownership and centralized, collective operation. Second, the state exerted macrocontrol over land use through strong laws and policy measures, strictly limiting the collective's right to dispose of the land, strictly limiting the way in which the land was used, tightly controlling the process of land management; the typical way in which this was achieved was through a strict system of agricultural planning management, including two strong systems: planning management over cultivation and planting, and a monopoly over purchases of farm products.

This binary structure had several inherent contradictions: this centralized management and centralized form of labor, with the collective as unit, conflicted with the basic requirements of most of the natural, economic, and social characteristics of land, land use, and agricultural production; the egalitarian system of labor distribution led to sham enthusiasm and the "big pot of rice." In addition, the centralized agricultural planning management system and the system of people's communes, with its "unity of government and commune," negated economic principles through administrative principles and negated collective ownership and operating autonomy by means of state management authority, which created an acute conflict between collective management and state management of the land.

These major organizational and institutional conflicts in the land system and the collective economic model itself gave rise to the historical impulse to

change the land system and the collective economic model and brought about an immense and far-reaching change in agriculture.

This change unfolded rapidly, with the breakthrough coming in the form of changes in the rights to occupy and use the land, and in the unity of the principal owners and principal operators. The intrinsic impulse towards household operations began to sprout within the rural economy from the very inception of the collective economic model. In the 1950's and early 1960's, however, household operations conflicted and clashed with collective management and was completely suppressed through powerful political pressure. The third outbreak of household operations occurred in the late 1970's, centering on certain backward regions, and this developed into a thoroughgoing reform that swept over the entire country. By means of contractual land operations, the household output contract responsibility system managed to separate land occupancy and use, principal owners and principal operators. The household became the principal decision-maker in land operational activities (production, labor, distribution, transfer, consumption, accumulation, and investment) and the basic economic unit with the status of legal person.

The household output contract responsibility system is a major historical change in the rural land system. It organically integrates public ownership, the most advanced form of land ownership, with individual production, the most appropriate form of land operations. This is important pioneering work for the socialist land system. However, the household output contract responsibility system is after all an institutional and organizational system that is still incomplete and immature; it retains several important institutional and organizational defects and conceals some major, long-term, fundamental conflicts.

1. Instability of the structure of land ownership. The structure of land ownership is the structure of land powers and functions; it includes the structure of microeconomic ownership (right of occupancy, right of use, and right of disposal) and of macroeconomic rights and functions of land use.

China's current land ownership structure is a changing triple structure: right of land occupancy, right of land use, and right of land management. This triple structure is tending to change as follows: 1) The right of land occupancy is tending to decline. As land ownership is being broken down, the right to use the land is being turned over to farm households, the right to dispose of the land is being turned over to the state, and the right to occupy the land is being retained by the collective; the collective's right to occupy the land is manifested only as legal occupancy and actual profit rights i.e., withholding. Actual land occupancy--rights and behavior to control land--is manifested only as limited land regulation and management. 2) Rights of land use are tending to expand. In principle, the right of land use is limited to planting. However, the current economic operating process has already greatly exceeded this narrow range; households not only exercise use of the land--the right to plant--but this has been expanded to occupancy--the right to actually control the land. This constitutes the right to control behavior over the right to use the land (transfer of land use rights) and the right to profit--the right to limited occupancy of land rents. 3) Land management rights are tending to become stronger. This is manifested most strongly in: strict

protection of land resources and control of land occupancy; control over land use; the use of legal measures to restrict the right to dispose of land.

2. Unorganized principals. Principals here refers specifically to the principals of land ownership, including principal owners, principal users, and principal managers.

The basic problem with the principals of land ownership is that they are not sufficiently organized. This shows up primarily as disorder (imprecisely defined functions and responsibilities, chaotic organization) and decentralization. 1) Principal owners. The disorganization of principal land owners is most saliently manifested in two areas: First, the vagueness of principal land owners. The Civil Code stipulates that land belongs in common to the villages, and administrative villages are the principal owners of land; the Law on Land Management states that land is owned by rural cooperative-sector organizations, and these organizations are the principal owners. It is contradictory that administrative organizations and economic organizations are both the principle owners of land. Second, cooperative-sector organizations vary greatly from one place to another, and their forms of organization are highly chaotic, so that principal owners are found in a state of high confusion. 2) Principal operators. The disorganization of principal household operators is most saliently manifested in two areas: First, their small scale. Second, their rigid structure. Distribution of land according to population created a sort of rigidly corresponding relationship between people and land, limiting the possibilities for any change in the operating scale of household land and holding down any greater organization of principal operators. 3) Principal managers. The issue now is the structural decentralization of functional institutions; if functions and responsibilities are not clearly differentiated, the state will be unable to exercise effective land management.

3. Lack of standardized laws and regulations. The previous two problems are both related to the lack of the necessary legal standards and regulations. 1) Land use lacks the necessary basis of legal standards and regulations. This is now the land system's most pressing problem. Existing laws and regulations offer no clear standards for the right of land use; this includes legal procedures and forms for the principals, status, demarcation, acquisition, and transfer of land-use rights, and legal measures to protect them. Land use rights are essentially a policy at work rather than a law at work. 2) Land ownership lacks the necessary basis of legal standards and regulations. Existing land laws and regulations stipulate only that land is owned collectively. They do not clearly stipulate the intension, status, demarcation, or legal form of land ownership, the legal procedures and forms to be followed, or how to achieve and protect the right of ownership. 3) There are no legal standards or regulations for the right of land management. Current land legislation apparently has no specific principles or provisions regarding the state's macrocontrol over land; as for legal standards and regulations for the right of land management, intension, status, demarcation, procedures, forms, and measures, and protection of interests, are all blanks.

II. Overhauling the Land System

The rural land system is still undergoing change, and several major, long-term institutional defects remain. This will necessarily restrict the long-term stable development of the rural economy.

Resolution of these major defects and basic problems in the land system will have to be achieved through major institutional and organizational overhaul. Essentially, overhaul of the land system involves a conscious effort to redo the system at the national level (particularly the central government); i.e., the positive fruits of the land system's historical structure and traditions must be carried on critically, and we must also learn from the successful experiences of other countries in establishing land systems, so as to create a new system and organization.

A. Principal Overhaulers: For the last eight years, the peasants have been the principal overhaulers of the land system, but a new land system cannot be accomplished through the spontaneous and scattered trials of 800 million peasants. This can be accomplished only through reliance on the state and its conscious initiative.

B. Basis of Overhaul: Overhaul of the land system does not mean creating a new institutional system but rather overcoming and solving the major defects and basic problems of the current land system on the basis of separating mechanisms and forms of household operations and principal household operators, in order to provide solid legal standards and a legal system for separating mechanisms and forms of household operations.

C. Motive Force Behind Overhaul: The structure of the motive force behind overhaul of the land system must be a compound structure combining a macroforce dominated by the conscious creative exercise of state power (central and local governments) with a microforce (the peasants' spontaneous institutional changes and restructuring). Only this sort of concentrated, compound force will be able to advance the major overhaul of the land system.

D. Mode of Overhaul: Overhaul of the land system must involve a form of change that combines top-to-bottom change dominated by the state's activity with bottom-to-top activity by the peasants.

E. Direction of Overhaul: The basic direction of overhaul of the land system is the conscious, controlled introduction of market mechanisms into land use, so that land is gradually turned into a commodity, real estate markets are gradually opened up, and controlled real estate markets under socialist conditions of land ownership are established, thereby creating a new land system, property system, and market system.

F. Overhauling the Microsystem:

1. Change the household output contract responsibility system. The core of the current land policy is the household output contract responsibility system, and this is the foundation of the entire land policy system. Implementation of a permanent-tenancy system is absolutely necessary if the

household output contract system and its long-term, constant policies are to be standardized, legalized, and systematized. The permanent-tenancy system is a special form of the tenancy system; it is the ultimate form of the separation of occupancy and use, principal owner and principal operator. When land use and land management are entirely independent of land ownership, the result is a complete form of tenancy: permanent tenancy. Its primary function is to provide a systematic foundation and legal form for land use and the principal operators. Formulating a policy of a long-term, unchanging household output contract responsibility system and extending land contracts to more than 50 years is also intended to provide a long-term, stable policy basis for land use and household management. This is consistent with the internal logic of the historical transition from the tenancy system to the permanent-tenancy system.

2. Establishing complete standards and regulations for land use. The household output contract system and the stabilization and systematization of the separating mechanisms and forms of household management it establishes must be erected on the foundation of standardization, legalization, and systematization of the right of land use.

Attainment by principal household operators of relatively independent land use rights constitutes the legal and institutional foundation for the household output contract responsibility system. 1) Inheritance of land use rights. If the household output contract system takes the institutional form of the permanent-tenancy system, and if land use takes the legal form of the permanent-tenancy system, the right to inherit land use rights is naturally unavoidable. 2) Limited right of disposal of land use rights. Equal distribution of land has created a situation of equal, small-scale land operations. With changes in population and employment, the transfer and concentration of land have been relatively widespread. Not only are land use rights transferred with and without compensation, but these land use rights are preserved in the transfer. We call this a limited right of disposal. 3) Limited right of occupancy of land use rights. The theoretical and legal basis of "compensation" and the economic source of this "compensation" have not yet been resolved. We believe that the transfer of land with "compensation" is a highly significant theoretical, policy, and legal problem. The theoretical and legal basis of "compensation" is rooted in the equal rights to the land which peasants enjoy: the most elementary rights to be employed and to earn an income, which we call the right to share in equal well-being. These most elementary equal rights have their source in the objective reality of people's equal occupancy of the land, the tight quantitative relationship between rural population and land resources, and the shortage of employment and income-earning opportunities. Implementation of the household output contract responsibility system means that peasants obtain land use rights within the same scope of principal ownership, which in fact means that they obtain the right to employment and income. The way in which these rights are obtained is directly related to the right of equal occupancy of the land. The land use rights obtained by individual (the organizational form is the peasant household) peasants comprising the principal owners are not purely formal land use rights; they are land use rights that carry with them certain elements of occupancy. The attainment of land occupancy rights by peasants constitutes the basis for limited rights of disposal and transfer with "compensation." This is

the theoretical and legal basis for transfer with "compensation." Since land occupancy rights are divided into two levels, collective and peasant household, the sharing of land rents obtained by the collective and the peasant household is naturally a logical and actual result. Collective withholding is the collective's share of land rents; the economic source of transfer with "compensation" is then the peasant household's limited share of land rents.

In this way, then, the right to use land is not merely a right to plant on that land; in its complete form, it should include the peasants' rights to occupy, use, and dispose of the land they contract for. This constitutes the essential substance of the legal standardization and institutionalization of land use rights.

3. Establishment of a system of land use certification. Creation of fully formed legal standards and systems for land use rights requires confirmation through some sort of institutional and legal formula. This formula is the land use certificate. It is proposed that land use certificates be uniformly printed and issued by county-level people's governments, acknowledging the peasants' right to use the land they have contracted for.

4. Land appraisal. Land appraisal is a fundamental task that has arisen spontaneously and become widespread in recent years. These spontaneous land appraisal activities should be organized, institutionalized, and given a theoretical foundation, so as to consciously set up a systematic land appraisal system, carry out society-wide land appraisal activities, and initially determine the theoretical, differential, and transfer prices of land. The conscious application of land appraisal will encourage peasants to invest in construction and operations on their land, and the prices can be used to put land into circulation.

5. Commercialization of land. Commercialization of land refers to treating land as a commodity in market transactions and achieving its free circulation by means of currency. This consists basically of the following: 1) Land becomes a commodity, with the currency characteristics of a commodity; 2) Land circulates in the form of value (with currency as the medium), obeying market mechanisms; 3) Land is exchanged on the market as a composite having the varied attributes of commodity, basic capital good, and immovable property, realized through purchase and sale, leasing, mortgaging, etc.; 4) The object of land commercialization is not land as material entity but rather land as property: property rights (the right to own land).

However, here the commercialization of land is not ordinary commercialization; rather, it is a special form of land commercialization, the right to use land within a macroeconomic situation of public ownership of land and macrocontrol by the state over land use: the commercialization of occupancy, use, and disposal. We call this "quasi-commercialization" of land.

6. Controlled, organized opening of real estate markets. Real estate market here refers to a special form of real estate market based on the system of public ownership of land and under the macrocontrol of the state. It is land circulation achieved through market mechanisms and forms of circulation. The

means used to achieve land circulation is not the ordinary deed representing land ownership but rather the land use certificate representing a special form of the the right to use land. The form of land circulation is also not one of the ordinary forms of buying and selling, leasing, or mortgaging land; rather, it is a special form of buying and selling, re-leasing, and quasi-mortgaging.

7. Establish a land credit system. Land credit is an important microeconomic, self-organizing, and self-regulating component of land use; it can provide principal operators with diversified credit services and is an indispensable component of the agricultural socialized services system.

a. Credit instruments: The commercialization of the right of land use implies that this right, like the right of ownership, is a transferable legal power and function, and the land use certificate is a legal instrument for the transfer of land use rights. Here, the land use certificate is a legal voucher representing the equal rights enjoyed by peasants and the principle of a stable supply of grain rations, so that the land can be put back into operation, thus making the land use certificate a credit instrument.

b. Mortgages. The mortgage referred to here is a mortgage under a macroeconomic situation of public ownership of land and state control over land use. It covers only the question of mortgaging the right to use land, not the right to own land. The mortgage instrument is not the ordinary deed but rather the land use certificate; the two are different in nature. Land credit, and particularly mortgages, play a very positive role. 1) They can promote the development of rural medium and long-term credit and fill in this essential blank; 2) Taking a mortgage promotes intensive farming and adjustment of the production structure, and speeds up the circulation of land.

G. Overhauling the Macroeconomic System:

1. Implement a system of land nationalization. On the basis of the current system of contractual production with the household as the principal operator, purely formal land ownership reverts to the state, collective ownership of land is eliminated, and this is recognized legally; thus, the contractual land relationship between the collective and the peasants changes to a direct contractual land relationship between the state and the peasants. The permanent-tenancy system is then used to institutionalize and legalize the contractual land relationship between the state and the peasants. This composite structure with the directly corresponding state ownership and peasant use, the state as principal owner and the household as principal operator, in no way changes the form of household production nor the equal, small-scale production structure, nor does it disturb in the slightest the economic, property, or legal status of the household as principal operator, nor the household's own interests. It can also strengthen the economic, property, and legal status of the household as principal operator and reinforce the peasants' sense of security and stability as they work the land. It also provides a stable institutional and legal foundation for household operations.

2. Create a uniform land taxation system. The current agricultural taxation system, collective withholding, and the welfare system and policy should be

changed and a uniform land taxation system implemented. This would include: 1) Changing the varied forms of land rents to a unitary currency land rent; 2) Combining taxation and rent. The focus of tax reform should be on combining rent (land rent, going to the collective) and taxation (taxes collected by the state), and instituting a unitary land tax.

3. Establish complete legal standards and a legal system for land management rights. This problem is very complex, and this article covers only certain major aspects of it. First, land management can only be by a central system: the state. This will make it possible to centralize land management authority to strengthen the state's macrocontrol over land and its use. The state's principal land management authority should be exercised through a centralized, authoritative body: a state land management commission. Second, the appropriate range of land management authority should be uniform, i.e., adapted to macrocontrol of land, and to microcontrol of land; it should be adapted to agricultural as well as nonagricultural land. Third, the basic substance of land management authority. Finally, the legal form of land management authority, which is land management law.

4. Establish a system for macroregulation of land use. The purpose of institutionalizing and legalizing land management authority is to strengthen the state's macrocontrol over land and its use; if the state's macrocontrol functions are to be strengthened, it is necessary to apply various regulating levers and establish an effective system of macroregulation.

a. Establish a land price regulating system. Land prices are comprehensive value indicators of the scarcity of the production capacity and economic supply of land itself. Land prices are used to regulate the scale and degree of land use, the rational distribution of all types of land, and the direction of land use; determine base prices for land transfers, control land prices, and land circulation and real estate markets; determine differential prices and control land operations.

b. Institute a system of elastic land taxation. This would include: An elastic taxation system related to adjustments in the productive structure of land, the basic characteristic of which would be an inversely proportional relationship between tax rates and the scale of land operations (within economic limits); the purpose would be to stimulate the circulation of land and accelerate the centralization of land. An elastic taxation system related to adjustments in the rural industrial structure, i.e., reliance on land tax rates to regulate rural replacement industries: processing, mining, communications and transport, commerce, and services.

H. Organizational Overhaul: Organizational overhaul consists of overhauling the principals on which the land system relies for its operation.

1. Overhaul of microeconomic principals: this is the basis of all organizational overhaul; it includes two basic aspects: overhauling principal operators and principal services. The basis of overhauling principal operators is the implementation of a policy of scale and fostering new principal operators of a certain scale. The direct purpose of overhauling principal services is to provide a high degree of socialized services for principal

operators. Here we shall mention only overhauling land credit principals, i.e., establishing a land bank to handle land credit operations.

2. Overhaul of macroeconomic principals: the basic point here is setting up a centralized, national-level land management structure to exercise land management authority and strengthen the state's macrocontrol over land and its use. Establishment of a nationwide land management commission would include technical, research, and administrative management structures.

CSO: 4006/890

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APPEAL FOR LONGER RANGE CROP DISEASE, INSECT PEST FORECASTING

40110046b Beijing ZHIWU BAOHU [PLANT PROTECTION] in Chinese No 3, 8 Jun 87
pp 49-51

[Article by Tang Xiangdong [0781 0686 2639], Anhui Provincial Farm Crop Disease and Insect Pest Measuring and Reporting Station: "Multiple-Year Forecasting of the Incidence of Crop Diseases and Insect Pests"]

[Abstract] In this article, the author calls for a multiple-year forecasting of crop diseases and insect pests that encompasses the total farmland ecosystem and uses systems dynamics and crop disease and insect pest evolution as the theoretical basis for long-range forecasting. He would replace the existing system that he feels one-sidedly places too much emphasis on single insect pests or diseases and the making of causal (but largely unanticipatory) deductions based on the life cycles of diseases and insect pests and direct environmental effects on them.

This call for a more integrated and long-range forecasting system has grown out of great changes noted during the past 30 years in the kinds and areas of incidence of pests and diseases, particularly in rice-growing regions of south China which were troubled mostly by yellow rice borers up until the mid-1960's, by mostly leafhoppers and leaf rollers in the 1970's and by sheath and culm blight in the 1980's. A similar progression of changes in diseases and pests was noted in wheat-growing areas of north China. Both might have been anticipated and guarded against had longer range multiple-year forecasting methods been employed.

The well developed crop monitoring system that already exists with its trained personnel who are already accustomed to reporting crop infestations and making forecasts could be built on to produce the new system. The new system would provide multiple-year forecasting of four different kinds, including the outlook for individual insect pests and individual diseases, comparative forecasting of various pests and diseases for individual corps, comprehensive forecasting of multiple pests and diseases for a single crop, and overall forecasting of crop pests and diseases for a single natural region or administrative area.

The author details all the factors to be included in the large-scale surveys, analyses, and experiments necessary to make multiple-year forecasting work, including socioeconomic conditions in affected areas as well as the more obvious biological, pedological, meteorological, pathological, and other factors, and he outlines the various methods, statistical and otherwise, to be used in making forecasts.

GAS BOMBS DEVELOPED TO KILL BURROWING RODENTS

40110046c Beijing ZHIWU BAOHU [PLANT PROTECTION] in Chinese No 3, 8 Jun 87
pp 45-46

[Article by Sun Dingguo [1327 1353 0948] and Qi Yunlong [7871 6663 7893],
213 Research Institute, Xian Arms Industry: "Use of 'Rodent Gas Bombs'
To Eradicate Zokors"]

[Abstract] The extensive damage done to newly afforested areas and to grasslands by zokors, a burrowing rodent resembling a rat mole, has prompted development of asphyxiating gas bombs to kill the zokors in their burrows. It is effective against other burrowing rodents as well. This method was found to be twice as effective as bait in trial use on Shaanxi grasslands, and it was found 87-percent effective against zokors in Ningxia Province.

The article never names the gas saying only that it is made from nontoxic and readily available raw materials, that production technology is simple and cheap (1 million doses per year being produced for 500 yuan) that the gas is produced when the material is burned, and that the proper load is 100 to 120 grams depending on the distance through burrows that the gas has to travel. The ashyxiated animals do not become poisonous; no pollution of the environment results; and no secondary toxification occurs.

Forestry and animal husbandry department in Qinghai, Ningxia, and Jilin have set up plants for its production, and help in operating manufacturing plants may be obtained from the 213 Institute of the Xian Arms Industry.

9432/12624

FOGGING TECHNIQUE USED AGAINST RUBBER TREE POWDERY MILDEW

40110046a Beijing ZHIWU BAOHU [PLANT PROTECTION] in Chinese No 3, 8 Jun 87
pp 11-12

[Article by Zhang Zuxin [1728 4371 2450], Wang Guangyuan [3769 1639 6678] and Liu Tongying [049] 0681 5391], Elemental Organic Chemistry Institute, Nankai University, and Zou Yonghua [6760 3057 5478], Huang Hongcai [7806 1347 2088], Wen Xiuguang [2429 4423 0342], and Li Yuanhe [2621 0337 0735], Baoting Tropical Crop Research Institute, Guangdong Province: "Use of Fenxiuning [4720 6907 1337] Hot Fog To Prevent Powdery Mildew of Rubber Trees"]

[Abstract] A triazole ketone known as Fenxiuning, which has been found very effective in the treatment of powdery mildew and rust on various crops as well as smut on grain crops, was used to treat powdery mildew of rubber trees on Hainan Island between 1984 and 1986. Results shows this new fogging technique to be 88.2-percent effective on small test areas, and 68.1-percent effective on large demonstration areas. This new technique is more effective than the traditional finely powdered sulfur method in the prevention and control of powdery mildew; it requires less intensive labor, and it is more efficient. Not only does the fog spread more effectively than the sulfur powder, but the specially designed equipment used to apply it is more portable than the dusting equipment.

The same technique has been applied successfully to the prevention of powdery mildew on cucumbers, but further work will be required before it can be widely used for large areas of cucumbers or other crops.

Results of experiments have been capsulized in two tables and one graph, and the text provides data on matters to be taken into consideration in using the technique, such as time of day, wind speed and direction, weather conditions, specie susceptibility to disease, etc.

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BRIEFS

ANHUI RAMIE OUTPUT--This year Anhui Province has sown more than 600,000 mu to ramie, a 170 percent increase over 1986; estimated gross output is 30,000 tons, a 100 percent increase. In 1986, gross output of ramie in Anhui was 12,700 tons, but the total amount used for export and the textile industry was less than 7,000 tons. [Excerpts] [Hefei ANHUI RIBAO in Chinese 5 Aug 87 p 2]

HEBEI FERTILIZER OUTPUT--In the first half of 1987, Hebei Province produced 2,888,000 tons of chemical fertilizer, estimated output for the entire year is 5,609,000 tons, deducting the part turned over to higher authorities, the province will retain 5,400,000 tons, and the state will allocate 637,000 tons to the province. [Excerpt] [Shijiazhuang HEBEI RIBAO in Chinese 6 Aug 87 p 1]

HUBEI RAMIE OUTPUT--According to recent statistics of concerned departments, Hubei Province has sown 1,663,000 mu to ramie, an increase of 826,000 mu over 1986; estimated gross output is 120,000 tons, a 140 percent increase over 1986. As of 10 July, Hubei Province had procured only 4,100 tons of ramie, a 49 percent decrease from 1986. [Excerpts] [Beijing NONGMIN RIBAO in Chinese 6 Aug 87 p 2]

HUBEI FERTILIZER PURCHASES--In the first half of 1987, Hubei Province purchased 2,589,000 tons of chemical fertilizer, a 26 percent increase over 1986, and the sales volume was 2,615,000 tons, a 19 percent increase. However, supply does not meet demand. In 1986, the area sown to green manure crops in Hubei was only 8,750,000 mu, a 42 percent decrease from 1980. [Excerpts] [Beijing NONGMIN RIBAO in Chinese 8 Aug 87 p 2]

YUNNAN INCREASES FARM INVESTMENT--As of the end of June, the Yunnan provincial finance department had provided 293,490,000 yuan in funds to support agriculture, a 22.1 percent increase over 1986. [Excerpt] [Kunming YUNNAN RIBAO in Chinese 31 Jul 87 p 1]

ANHUI WHEAT STORAGE--As of 31 July, Anhui Province had put 1,654,300 tons of wheat in storage. [Excerpt] [Hefei ANHUI RIBAO in Chinese 9 Aug 87 p 1]

HEBEI AERIAL SOWING--During the rainy season, Hebei Province afforested 1,430,000 mu by air, a 20 percent increase over 1986. [Excerpt] [Shijiazhuang HEBEI RIBAO in Chinese 11 Aug 87 p 1]

SHANXI FISH BREEDING--At present, there are more than 2,900 specialized fish breeding households in Shanxi Province, and the fish breeding area is 40,000 mu. Prior to 1978, annual fish output in Shanxi was only 500,000 kilograms, and 95 percent came from reservoirs and state farms. In 1986 Shanxi produced 4,000,000 kilograms of fish, and more than 2,340,000 kilograms were produced in rural areas. [Excerpt] [Taiyuan SHANXI NONGMIN in Chinese 15 Aug 87 p 1]

SHANXI ANIMAL HUSBANDRY--According to statistics of concerned departments, as of the end of June, the number of large animals in Shanxi Province totaled 2,739,200, a 1.42 percent increase over the beginning of 1987 and a 2.61 percent increase over the same period in 1986; females numbered 879,700. The number of cows removed from inventory in the first half of 1987 was 80,100, more than 27,200 head over 1986. At the end of June, there were 5,209,500 goats; 476,400 were removed from inventory, increases of 8.7 percent and 7.1 percent respectively over the same period in 1986. At the end of June, there were 3,188,500 pigs in Shanxi, a 13 percent decrease from the beginning of 1987, and a 16 percent decrease from the same period in 1986; 1,162,000 were removed from inventory, a 2.8 percent decrease from the same period in 1986. At the end of June, there were 34,121,100 chickens, a decrease of 3.98 percent from the beginning of 1987 and a 11.9 percent decrease from the same period in 1986. [Excerpts] [Taiyuan SHANXI NONGMIN in Chinese 15 Aug 87 p 1]

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REPORTS ON CHINA'S STRATEGIC MISSILE FORCE

2d Artillery Corps Engineering College

Beijing JIEFANGJUN SHENGHUO in Chinese No 7, 13 Jul 87 p 21

[Article by Zhang Yuying [1728 3768 3853]: "Cradle of Strategic Missile Officers"]

[Text] In an open space outside the ancient capital of Xian, at the western foot of the Li Mountain, with its beautiful scenery, there is a beautiful campus through which the waters of the Ba River wind leisurely. This is the famous 2d Artillery Corps Engineering College of the PLA--the cradle of strategic missile officers.

This college was founded in 1959, when New China's spaceflight undertaking was just getting started. It has now developed into a higher military seat of learning that has a perfected training system, that has a complete set of specialities, and that is both a teaching center and a scientific research center. Now, with regular college courses and Master's degree graduate students made primary, this college is actively preparing to enroll China's first group of PhD graduate students in the speciality of strategic missile applied engineering. The PLA's biggest strategic missile operation training hall stands stright and tall at the eastern side of the teaching area, and adjacent to it is the PLA's biggest strategic missile simulation training center, which is just being established. This highly modernized, huge system includes a monitoring and control room and 3 subsystems--launch simulator, controlled system dynamic state simulation, and flight simulation--with 16 sub-subsystems. Its establishment reduces the operation of actual equipment to the minimum frequency, and saves a large amount of military expenditure, so that for the PLA's strategic missile teaching and training there is basically formed a system with a complete set of theoretical studies, simulation training, and actual equipment operations, which has reached the world's advanced level for teaching and training.

The college has a teaching and scientific research backbone contingent with professors, associate professors, senior engineers, and senior experimenters as its academic leaders. Academic activities in scientific research are extremely lively. In the past several years, more than 100 scientific research topics have been completed, among which some were given PLA S&T

progress awards, and some of the projects filled gaps in China or attained the advanced level in China. The mobile rapid launch procedure for a certain type of strategic missile that was newly restructured by Associate Professor Xu Hualong [1776 0553 7893] and others was given the state's top award for S&T progress. The "Analytic Design for a Solid Star Pellet," written by Associate Professor Lu Changtang [0712 7022 1016], has been published in the famous authoritative U.S. magazine "AD REPORT." The success in research obtained for the first time in China by Associate Professor Li Jingwen [2621 2529 2429] and others on the "theory of getting the initial value of a circle by the D. K. A. method" in the contemporary world is causing a great improvement in the computing accuracy and efficiency of the comparatively advanced "D.K.A. method," a development that is evoking repercussions in China and abroad.

This college, which is the only strategic missile engineering technical college in the PLA, has made important contributions to the PLA's modernization. After the PLA made its strategic change, the college is fast taking on a new appearance, and a large group of talents for highly sophisticated technologies, which will be needed in the Strategic Missile Forces at the beginning of the 21st century, are being trained here.

Missile Launch Commander

Beijing JIEFANGJUN SHENGHUO in Chinese No 7, 13 Jul 87 p 23

[Article by Sun Fenghe [1327 7685 0735]: "A Well-Thought Plan for Steering the 'Magical Arrows'"]

[Text] At dusk motors roared at a certain missile launch site. A nuclear counterattack operation drill and a live missile launch, under conditions approximating actual combat, were being conducted in an intense manner.

In the underground command post, a commander, whose age had passed the half-century mark, issued orders steadily, calmly, and decisively.

This commander's name is Zhang Wen [1728 2429]. He is a commander who enjoys high prestige in the missile force. As of now, he has been involved with missiles for 27 years, and he has successfully commanded the launching of a number of missiles.

At the beginning of the sixties, when Zhang Wen was just out of his teens, he was taken out of an artillery company and sent to a missile college to pursue advanced studies. He became one of the first generation of missile force commanders trained by the PLA. He made up his mind to devote his life to the missile cause. Following the development of national defense science and technology, new-type missiles emerged one after another. The missile force gradually expanded, and Zhang Wen went from the post of launch company commander to the posts of launch battalion commander, launch regiment commander, and launch force commander. In order to master, from the overall aspect, the laws of missile launches and improve his command art, he diligently studied books on specialized theories, totaling several hundreds of thousands of words, and modestly asked professional comrades to instruct him. Every time the force trained in operating actual equipment, he personally

went to the site of the training, where he conscientiously summed up both positive and negative experiences during the operation. He accumulated a large amount of valuable data, and became proficient in the several dozens of specialities at each position. Once he led the force in carrying out the mission of an exercise of mobile operation and live missile launch. When the missile was being checked for transport to the launch site, it was discovered that there was a breakdown in the No 3 convertor inside the instrument compartment. It was already close to the time stipulated for the launch. If, in accordance with the usual practice, it were to be put in a level position for changing the instruments the chance for combat would be forfeited. Zhang Wen resolutely determined: Break free from convention. First set the missiles upright and then make the changes, work on the top and bottom of the missile at the same time, and insure that the missile is launched on schedule. When the good news came that "the launch was successful and its results were outstanding," the position was astir with jubilant crowds. The leaders of the General Headquarters and the cadres and fighters at the site unanimously praised Zhang Wen's wisdom and courage and his decisive art of command.

Even though Commander Zhang Wen is greying at the temples, he is still incessantly determined. In recent years, he has led the force in successfully conducting adaptability training under conditions of low temperature, operational training under conditions of a reduction in personnel, regularized operational training, and operational training under circumstances in which the target of launch fluctuates. He has also written more than 10 academic papers, including "Get a Good Grip on Three Links in Operating Actual Equipment." He has made a prominent contribution to the development of China's missile cause.

Mobile Rapid Launch Procedure

Beijing JIEFANGJUN SHENGHUO in Chinese No 7, 13 Jul 87 p 23

[Article by Wang Dwen [3076 1795 2429]: "A Man Who Is Particular About Each Minute and Second"]

[Text] In the golden autumn month of October 1986, news of an explosive nature came from the 2d Artillery Corps Engineering College: the mobile rapid launch procedure for a certain type of strategic missile that Lecturer Xu Hualong and other comrades concerned had restructured cuts by three-fourths the originally stipulated launch preparation time, and makes a major contribution to improving the survivability and operational capability of the Strategic Missile Force.

Xu Hualong clearly knows that "time is armed force." For China's Strategic Missile Force, which upholds the principle of gaining mastery by striking only after the enemy has struck, cutting the launch time is extremely important. To solve this major problem, he made use of the opportunities of the force taking part in training and tests, and one by one scientifically analyzed and studied the entire program and the main operating topics of the launch procedure for this type of strategic missiles, as well as the equipment and the key positions on the ground. He made major innovations on more than 10 key items in the original procedure, changing the operating program from a

vertical echelon line to a horizontally arranged combination, so that the preparatory work and the testing work for a missile launch are done simultaneously. After proofing a large amount of data, in close cooperation with a certain research institute and units taking part in testing, he conducted voluminous tests. Under circumstances of a partial cutoff of electrical power supply, when the thermal-engineered parts were at the absolute safety parameters for bearing strong voltage, he made use of poor environmental and climatic conditions to conduct more than 50 scientific tests of thermal-engineered parts, in which he obtained a large amount of conclusive data that led to decisive effects, so that the thermal-engineered parts were joined under circumstances of less than a total cutoff of the electrical supply, and this was done at the same time as the other operating items, thereby saving launch preparation time. This result was given the state's (covered item) top award for S&T progress.

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STRATEGIC TRAINING GOALS FOR YEAR 2000

Beijing JIEFANGJUN BAO in Chinese 23 Jun 87 p 2

[Article by Yue Qingchi [5641 3277 3069]: "Taking the Path of Joint Training; Training Composite-Type Talents"]

[Text] Editor's note: College and school education is one of the key strategic points in the PLA's development. To achieve the strategic goal stipulated by the Central Military Commission for the development of the PLA's colleges and schools by the year 2000, and to promote the strategic change in the education and training of the colleges and schools, this newspaper will publish in succession exploratory articles concerning the strategy for developing the colleges and schools. We welcome everybody to integrate with the reform of the colleges and schools and the reform of the entire PLA, to study and explore from the macro angle the question of developing the PLA's colleges and schools, and to suggest ways and means for setting up and perfecting as fast as possible a scientific system for the PLA's military education.

To train a large group of talents in command, management, and specialized skills suited to the needs of armed forces' modernization and future wars against aggression, the Central Military Commission decided to test-run a number of comprehensive major adjustments, and this is a strategic measure for the development of the PLA's colleges and schools.

I

The rapid development of modern S&T is causing profound changes in the patterns of war, the composition of armed forces, the modes of operation, and the means of command. A unit is a small society. For a commander to direct with facility the units under him, he must gather in his own person military, social, technical, and management sciences. This is the reason that the military colleges and schools of all countries in the contemporary world are taking the path of joint training in military and government affairs, S&T, and management, and is also an inevitable tendency in the development of training in military schools.

The U.S. Armed Forces have always paid attention to training officers with all-around accomplishments. Particularly in the training of primary-level

officers, with education in the regular courses of a college of science and engineering as the foundation, and in accordance with organizing teaching by courses, the U.S. Armed Forces do not separately train commanding officers and engineering and technical officers; it is only just before taking their posts that they are given short periods of specialized training in the specialized schools of their arm or branch of the service. Before 1960 the Soviet Armed Forces divided their commanding officers and their engineering and technical officers into two series and trained them separately. At the beginning of the sixties, because of the sudden change in quality in the development of weapons and equipment, the repair, maintenance, and use of the weapons and equipment became more complex with each passing day, and so the separate training of commanding officers and engineering and technical officers became unsuitable. The commanding officers had to have fairly profound knowledge of engineering and technology, and the engineering and technical officers also had to have knowledge of campaign studies and strategic aspects. Therefore, the Soviet Armed Forces took the path of joint training--they merged some command colleges and engineering colleges. Practice proves that officers who have been jointly trained have a wide range of knowledge and a strong adaptability.

Modern warfare is a combined operation by all branches and arms of the service. If officers at all levels and of all types are to adapt to this development in warfare, we must first combine their knowledge structures by making them understand both military command on the one hand and engineering techniques and military management on the other. Since the founding of the PRC, the PLA's military command talents and its engineering and technical talents have been separately trained in command colleges and schools and in engineering and technical colleges and schools. As a result, those who learned command were not proficient in engineering and technology, and those who learned engineering and technology were not proficient in command, giving rise to the phenomenon of "two layers of skin." Under circumstances in which weapons, technology, and equipment were comparatively simple and the degree of combined arms in the units was not high, the drawbacks of this kind of single-type talents were not highly evident. But, following the development of weapons and equipment and the raising of the degree of combined arms in the armed forces, it is very difficult for single-type talents to meet the needs of national defense modernization, and not only would they adversely affect the units' training and management, but even would adversely affect victory in war. The way to effect a permanent resolution of this contradiction is to implement joint training in command, management, and technology.

II

Implementing joint training in command, management, and technology is a major reform of the system for training officers, and it will certainly bring a comprehensive change to college and school building. This change will involve all aspects, from the guiding ideology for teaching to the content, methods, management, and support of teaching. Our college is the first engineering technical college in the PLA to implement joint training in command, management, and technology. In the past, our college was divided into two specialities, which separately trained tank technical management cadres and tank platoon leaders; in implementing joint training, these two specialities were merged into one speciality--the speciality of tank command and of

technology and management. In the past it took 4 years' time to train single-type talents, but now with joint training, composite-type talents are trained in the same amount of time. The students trained in this way possess both the quality of a tank technical management engineer and the quality of a primary-level commander in the Armored Corps. This new joint-training teaching system is not a simple piling up on top of each other of the three sciences of military command, engineering and technology, and unit management, but, with the goal of training composite-type talents, it is a mutual permeation and blend of the above-mentioned three main courses, in order to establish a brand-new educational system. Therefore, it is a complex piece of systems engineering.

The key to originating this kind of new joint-training systems engineering is the correct handling of the contradiction between teaching content and teaching time. All the conclusions we have reached tell us that this contradiction can be resolved. First of all, there are the knowledge structures of the fendui commanding officer and the technical management officer, the main thing being their identical aspects. What is different is that for command officers the demands for military quality are somewhat higher, and for technical and management officers the demands for specialized skills are somewhat deeper, and it is demanded that composite-type talents possess both these things. Second, the specialized training goal of joint training is the basic quality of management engineers, which is clearly different from that for the designing or manufacturing engineers. In the course system and teaching content, the two are clearly different. Based on these two characteristics, in over 2 years of teaching practice, starting with changing our concept of teaching, we have taken a series of reform measures, which have fairly well resolved the contradiction between teaching content and teaching time:

--We transformed the course system, cutting out-of-date or duplicative content, cutting or merging some secondary courses, and adding new disciplines.

--We put a lot of effort into the overlapping and permeation of the disciplines. We made full use of the advantageous conditions that in an engineering technical college the subject departments are comparatively complete, and the teaching staff conditions and the experimental equipment are comparatively perfect, which makes it convenient to organize scientific research to tackle key technical problems. In the process of the overlapping and permeation between basic courses and specialized courses, between military command and engineering techniques, between natural sciences and social sciences, as well as between the various technical subjects, joint training was conducted, and with fairly little investment fairly quick results were obtained.

--We made full use of audio-visual teaching, simulation training, and other modernized means of teaching to reduce classroom lecture time, strengthen the practical links, and accelerate the process of turning knowledge into capability.

--With regard to estimating teaching quality, we changed from putting particular stress on intellectual development to effecting an overall balance of the moral, intellectual, physical, and work style, and we comprehensively put the credit system into practice and strictly put the sifting and selection system into practice, thereby in general insuring the overall development of the students.

III

Like other newborn things, joint training in command, management, and technology has a powerful lifeline. Once it appeared, its superiority was fully reflected.

Training talents to possess a composite-type knowledge structure can increase their adaptability, and give them a strong potential for development. In accordance with the divided training systems of colleges and schools, the first post to which students who graduated from primary command colleges and schools are assigned is that of platoon leader, a post in which they can make use of what they have learned. However, when they progress to the posts of deputy company commander, deputy battalion commander, and deputy regiment commander, posts in which they are responsible for technological matters, their knowledge is not suitable. Similarly, the first post to which students who graduate from engineering and technical colleges and schools are assigned is usually that of platoon leader. A platoon leader is a commanding officer, and he doesn't make use of his strong points when in this post. When he becomes a deputy company commanders, his knowledge is suitable for the technical work for which he is responsible; but when he takes the posts of company commander, battalion commander, regiment commander, or even higher, his knowledge is not suitable. The law of maturation for cadres in units is to begin with being a platoon leader and then progressing up the ladder rung by rung. It is very difficult for a single-type talent who has come out of the separate training system to adapt to the law of development of basic-level cadre posts in which command and technical posts alternate. By taking the path of joint training, this defect can be basically overcome, and it can give talents who possess a composite-type knowledge structure good adaptability and a strong potential for development.

Making the training system comprehensive is advantageous for smoothing the relationships of college and school development. Joint training in command, management, and technology is a major concept, and its specific methods and forms are manifold. For example, merging command and technology into one speciality is a case of joint training; putting command officers and technical officers in one school for training, and after they have finished the common college subjects, to give particular emphasis to each, is likewise a case of joint training. No matter what forms of joint training are chosen, they all tally with the trend to make military colleges and schools comprehensive. Running comprehensive military colleges and schools will insure the scope of key colleges and schools, and with this kind of quantitative reforming, the teaching quality will be higher. Of course, this kind of comprehensiveness mainly means primary command and engineering technical colleges and schools, that is, colleges and schools that lay the foundation. Provided we lay a good foundation for the growth of officers, so that they possess a composite-type

knowledge structure and a multifaceted quality, we can subsequently lay a solid foundation for a short period of separate training before their promotions. All of this is in order to overcome the current phenomenon in which, no matter whether it is a primary-level, intermediate-level, or high-level command college or school, the students learn the same level of foundation-nature scientific and cultural knowledge and engineering technical knowledge. When this phenomenon is overcome, a good cycle will be formed.

Multidiscipline all-around education is advantageous to the synchronous development of education in the military colleges and schools and the state's higher education. Developing a transdiscipline educational structure, in which while training "specialized talents" emphasis is put on "all-around" education, is one of the characteristics of the education in the state's institutions of higher learning. Someone once made an analysis and discovered that many people who won Nobel prizes were "all-around talents" who had engaged in studies of a comprehensive nature. At present the armed forces are a group in which S&T are most concentrated, and the education in military colleges and schools and the state's higher education are developing synchronously. We certainly must change the state of affairs in which the liberal arts and sciences are broken apart, science and engineering are broken apart, specialities are differentiated too finely, courses are numerous, and there is a lack of lateral relations; and we must open up the qualifications for specialization, and gradually develop and perfect the joint-training teaching system, in order to train a new generation of military talents whose span of knowledge is large, whose adaptability is strong, and whose military and political quality are good.

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INITIATIVE NEEDED TO REFORM COMBINED TACTICS

Beijing JIEFANGJUN BAO in Chinese 19 Jun 87 p 3

[Article by Huang Peiyi [7806 1014 5030]: "Thinking Freely About Reform of Combined Arms Tactics"]

[Text]

I

The history of warfare proves that the development of weapons and of military technical equipment inevitably causes changes, and even transformations, of tactics, and every major reform fully releases the operational energy of armed forces.

The tactical reforms of the past were generally of the "passive type," that is, after units were equipped with new-quality weapons, consideration was given to making the tactics more suitable, but very many times, only after paying a heavy price in blood, were the drawbacks of the old tactics discovered. The military regulations left behind by their predecessors, like shackles, confined the minds of military officers. They ignored improvements in military technology and were constrained in the frames of thought formed long ago. Conversely, the enlisted men frequently showed more intelligence than the officers.

Under modern conditions, this "passive-type" reform is already far from adequate. Before the last century, the development of military technology was comparatively slow. From the appearance of firearms to the use on the battlefield of the machinegun, magazine-style rifles, and other rapid-firing weapons took a full 600 years; the tank with the internal-combustion engine has been around close to 100 years, but, under modern conditions, the newest S&T results are always first used in the military domain, and some of them are developed under the stimulus of military needs. This caused new-quality weapons to emerge in an endless stream, and often, without waiting for completely new results in which tactical reform promoted adaption to new circumstances, the units began to be equipped with new weapons. Therefore, today's tactical reform must change from the "passive type" to the "initiative type."

II

The "initiative-type" reform needs to make "leading" information its basis, because only by making scientific forecasts of the trends in development of weapons and equipment can the direction of tactical reform be made clear.

In forecasting the trends in the development of weapons and equipment, we must not just look at the weapons and equipment that have been used or have appeared in local wars, but should keep in mind the development of S&T. In history, there was the developmental track of gunpowder weapons--flintlock gun--rifled gun; today, following the development of microelectronic, laser, and microwave technologies, in antitank missiles there will certainly appear the developmental track of wire-guided--radio-guided--artificial intelligence. Because the fiber optics technology and the laser technology have already taken a big stride toward industrialization--a kind of completely new information transmission equipment--various kinds of fiber optic communications equipment will be used on the battlefield. By adopting this method of "leading" along a delayed track, it will be possible to make scientific forecasts of the trends in the development of weapons and equipment.

For a new-quality weapon's appearance to cause a tactical transformation, there must be a premise, namely, that a large number of this weapon is used, or at least that it plays the main role in the equipment of some units. The helicopter appeared in 1937, but it was not until the sixties that the tactic of airmobile operations appeared; the antitank missile appeared in 1945, but not until after the Fourth Middle East War in 1973 did it cause a transformation in tank offensive tactics. Obviously, there must be an appropriate degree of "lead," and in forecasting the effect of new weapons one must have the concept of measure.

S&T development long ago transcended national boundaries, and certain new S&T information is shared by the whole globe. Therefore, the forecasting of the appearance of new weapons must not be constrained by our country's borders.

History also tells us that in reforming tactics we should pay attention to the full exploration of a weapon's functions. Although tanks appeared in large numbers during certain campaigns in World War I, their function was that of the rapid shock of "armored cavalry," and they went through nearly 20 years of frustration before manifesting themselves. Although today the helicopter has many military uses, its functions have not necessarily been fully explored, and they could have a big potential. What is more, the operation and functions of the various kinds of weapons and equipment in a combined arms force have a great impact on the pattern and structure of its composition. Since World War I, people have been trying to find out by tests the best pattern of composition for a combined arms force, but as of now the best has not been achieved. Following the development of warfare, the form of the composition of a combined arms force must constantly change. Which form we should adopt is precisely the question in combined arms tactical reform that we should ponder.

III

Combined arms tactical reform is a complex project, which requires the joint efforts of all branches and arms of the service. As of now, we cannot yet predict the specific content of the new combined arms tactics. However, like the appearance of all newborn things, we already can see, from the various factors and conditions helping to produce new tactics, a rough outline of the basic trends in tactical reform.

First, following the appearance and use of a large number of new-quality weapons of all types and kinds, tactical measures will develop in the direction of diversification. For example, units on defense can send out armed helicopter formations to suddenly leap up and attack the enemy's advancing columns, and they can even make sudden raids on the enemy while he is assembling; use can be made of the final stage-guided shells of howitzers to conduct a long-distance directed attack against the enemy's advancing columns; and so on and so forth.

Second, because a large number of weapon systems that have high-precision, high firing speed, big power, and long range will be used on the battlefield, the armed forces' operational deployments and battle formations will tend to be dispersed and irregular, and operational movements will develop in the direction of being made underground and invisible. The various advanced weapon systems plus the advanced search, detection, and reconnaissance equipment unprecedentedly increase the danger to units on the battlefield, and pose a serious challenge to traditional tactics. The tactic of the past in which in a close formation we assaulted the enemy position in one wave after another is already unsuited to the new circumstances. We must adopt small, flexible battle groupings and apply "colony" attack tactics, making attacks on the enemy with comparatively dispersed battle formations--as one attack fails another arises, and as one is hidden another is exposed. The clear, regular nature of the battle formations of the past provides precision-guided and artificial intelligence weapons with an opportunity to exploit. Therefore, battle formations must develop in the direction of irregularity, so that they have quite a lot of variability and flexibility, being limited as little as possible by geometric patterns. In future operations, within a given time and space, it is entirely possible that a unit will expose itself and be discovered, be discovered and then hit, and being hit then destroyed. To improve battlefield survivability, operational units will have to take various kinds of measures, such as concealment, camouflage, and tactical deception. Also, they will have to make as much use as possible of tunnels, hidden communication trenches, or other underground engineered facilities for movement.

Third, because battlefields are getting vaster day by day, and situations are changing sharply, the units' tactical actions will become more and more mobile. To reduce losses, attacking units will have to assemble at a place fairly far away and make their battle preparations, and it is even possible that they will directly start the attack from the area where they are regularly stationed. To attain superiority in the balance of military force, the attacking units will suddenly and swiftly concentrate, and after completing their mission suddenly and swiftly disperse and take cover. It may

be predicted that the two belligerents will frequently and swiftly make tactical movements, which will cause future battles to have a high degree of dynamism. Mobility will become the dynamic factor deciding victory and defeat. A unit fairly small in number but with good mobility sometimes can defeat a unit that is superior in number but without good mobility. In addition, because of the increase in the range of weapons and the improvement in their accuracy, the enemy could, during the course of our movement, make uninterrupted attacks, causing future tactical movements to be extremely complex and difficult. Obviously, the long-echelon, small-interval march formation of the past, particularly the "long string-type" of march formation of tank and motorized units, is not suited to the new circumstances and needs to be replaced by multiroute, multibatch, flexible, and irregular formations. Some people think the method of adopting rigid program control for the marches of armed forces is already outmoded, and that, like the workers being liberated from the conveyer belt, there should be a reform of the method of program control. This is a point worth pondering.

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LIAONING PAP CONSOLIDATES COMMAND ORGANIZATIONS

Beijing JIEFANGJUN BAO in Chinese 27 Apr 87 p 1

[Report by Wang Zhangkui [3769 0594 7608]: "Liaoning Zongdui of People's Armed Police Dismantles, Merges Redundant Command Organizations"]

[Text] To make command, management, and logistics support more rational, the Liaoning Provincial Zongdui of the People's Armed Police (PAP) has dismantled or merged duplicative command organizations. Last year it dismantled two directly subordinate detachment organizations, and in the first part of April this year, it merged three directly subordinate detachment organizations.

When the Liaoning Zongdui was formed, directly subordinate detachments and city detachments were separately set up in six cities, and in juxtaposition they performed detention, guard, and similar duties. The duties of some directly subordinate detachments cut across prefecture lines, and organizations exercised their command function several hundreds of kilometers away. This caused a series of inconveniences to the units' command, management, logistics support, and other work. Last year the party committee of the Liaoning Zongdui in succession dismantled two directly subordinate detachment organizations in Shenyang City and Kangping County. In April of this year, it will merge the directly subordinate detachment organizations and the city detachment organizations in Fushun City; it will merge the detachment organizations in western Liaoning with the Chaoyang City detachment organizations, which have jurisdiction over that area; and it will dismantle the detachment organizations in Haicheng City and put their units, in accordance with the principle of division by region, separately under the leadership and management of the Dalian City Detachment and the Yingkou City Detachment.

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GUANGZHOU MR REFORMS OPERATIONAL EXERCISES

Beijing JIEFANGJUN BAO in Chinese 26 Jun 87 p 1

[Text] On 9 June, at the leadership organizations of the Guangzhou Military Region, this reporter watched an exercise in which it was hypothesized that a local war had suddenly broken out and had reached the confrontational stage. The indoor operational [zhanyi 2069 1763] exercise, in which the Guangzhou Military Region made use of existing communications facilities, with the command posts of a "Red" group army having the same directing unit, same scenario, and at a long-distance at the same time playing their roles, ended satisfactorily.

Han Huaizhi [7281 2037 2535], an assistant to the PLA chief of staff, who watched the exercise from beginning to end, thought that it had jumped out of the tactical category and entered the operational level. In directing method, organizational plan, as well as specific implementation, it reflected the spirit of reform and trail blazing. With regard to training the operational consciousness of high-level cadres and leadership organizations, it provided experience for exploring the PLA's methods and ways of operational training.

You [1729], the commander, and Zhang [1728], the political commissar, of the Guangzhou Military Region, were in charge of directing the exercise. The general director of the exercise, a leading comrade of the Guangzhou Military Region, briefed this reporter: After the group army became an operational army group in the PLA, there was an urgent need for operational training. The biggest characteristic of this exercise was that it was a change from the former "one directing, one performance" to "one directing, many performances."

Inside the directing unit, this reporter saw a scene in which a crack directing group, with the help of microcomputers, facsimile machines, telephones, radiotelephones, and other means of command, handled orders, instructions, notices, and other series of operational information, and in an orderly way simultaneously directed and looked after a number of command posts, which were scattered over several provinces, of the "Red" group army. A responsible person of the training department said: This is called an application of the communications facilities already set up, in which the higher level directs and the lower level performs, and in which there is one direction but many performances. Its advantage is that the range of training participation is large, it is simple and convenient and economical, and it has a lifelike atmosphere.

In former years, when the face-to-face mode of "one directing, one performance" was used, in 1 year training could only be arranged for the group army. In this "one directing, many performances," the senior officers and organizations of all army-level units in the military region simultaneously took part in the training, thereby greatly shortening the training period. In this exercise mode, the existing facilities at the permanent sites are used, so there is a great saving in costs. Except for pencils, pencil sharpeners, and other office utensils, there is no need for extra expenses. Because in a "one directing, many performances" exercise, the number of personnel for directing the exercise is greatly reduced, if we calculate for every unit taking part in the exercise, the number of persons needed is only a third of that in the former "one directing, one performance" exercise. In this exercise, the "Red" and "Blue" forces mobilized a total of several dozen divisions, including Army, Navy, and Air Force units. The area of the exercise extended across provinces and regions, and its situation was complex. In the command post of a "Red" group army, this reporter felt an atmosphere approximating actual combat. Orders, instruction, notices, and diagrams came one after another. All the commanders taking part in the exercise led their own headquarters, political and logistics organizations in intense operations of judgements, strategic decisions, and commands, conducting linked drills on three campaign [zhanyi 2069 1763] topics of five parts. An army-level commander said with feeling that this was a highly difficult comprehensive test of strategy, command, coordination, and even physical strength.

In this exercise, several thousands of pieces of information were transmitted. Because full use was made of modernized means of communications, basically there were no hand copies of orders and cables, and there was a great increase in efficiency. The Guangzhou Military Region will make the "tactics" touched on in this exercise part of a special-topic academic discussion meeting it is organizing.

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DESCRIPTION OF NATIONAL PROVING GROUND

Beijing BINGQI ZHISHI [ORDNANCE KNOWLEDGE] in Chinese No 3, 15 May 87

[Article by Qiao Tianfu [0829 1131 1381]: "The National Firing Range North of the Great Wall"]

[Text] On the 1,000 li long ice bound Horqin grasslands is located China's main testing base for conventional weapons. It was in August 1954 that following receipt of orders from the Central Military Commission, the first generation of college students in New China and soldiers wreathed in gunsmoke from the Korean War entered this snow and ice covered virgin land on ox carts. The young republic began the building of its first conventional weapons firing range on a barren tract. During the past more than 30 years, the base has completed thousands of tests from which large quantities of scientific research results have been obtained. Weaponry that has been tested and appraised at this base is in service everywhere in the air, on the land, and on the sea.

After more than 30 years of arduous struggle, the site that had originally consisted of only a ground artillery and infantry weapons firing range has been built into a complete testing base on a considerable scale for army, navy and air force conventional weapons. The base applies advanced scientific and technical methods and specialized testing standards to conventional weaponry such as surface artillery, antiaircraft artillery, naval guns, light weapons, ammunition, detonators, aerial bombs, military optical devices and meteorological instruments to make finalized design appraisals, to write firing tables and bombing tables, to provide a scientific basis for weapons research, design and production, and to equip military units, becoming an authoritative organization for the testing and authentication of conventional weapons for the country.

Facing recurring snows, but filled with thoughts of spring and harboring feelings of reverence, we visited this testing base that had made such outstanding achievements. First we met the developers and builders of this base. This was a corps of scientific and technical cadres that was "particularly able to bear hardships," who nurtured great aspirations for China, and who had come here from all over the country to work anonymously, not seeking gain but only desiring to make contributions, using their own blood and sweat to write stirring chapters in the history of China's weapons development. History will record their heroic names.

The leaders warmly ushered us into the test range where the light weapons testing center was engaged in the testing of light submachine guns. In the laboratory all sorts of instruments were in operation testing weapons systems. In live warfare simulation tests, weapons underwent most severe testing including continuous firing, and high and low temperature testing in which the temperature was raised suddenly to 50 degrees centigrade and lowered suddenly to -40 degrees centigrade; blowing dust experiments in which gunners did continuous firing in a sand-filled atmosphere; and rain storm experiments in which gunners suddenly immersed in muddy water gun barrels that had been fired till they became hot, then pulled them out and fired them as usual.

Suddenly the sound of a tremendous explosion attracted our attention. Moving in the direction of the sound, we reached the test area for armor piercing shells. Here was arrayed more than 10 upright and reclining target frames on which steel plates were covered with shell holes attesting to the power of various kind of anti-tank artillery shells. We stopped in front of a piece of layered armor plate at the top of which there were holes, one after another, made by the penetration of a new type armor piercing shell. Use of a reeled tape showed the holes to be several hundred millimeters deep.

As the night wore on and the temperature on the grassland fell to -20 degrees centigrade, servo-firing tests were underway at a certain antiaircraft artillery subsystem at the firing test area, self-propelled antiaircraft guns with full loads of shells turning freely to high and low positions. "3, 2, 1, Fire!" With this command from the gun position commander, the commander in the control room pressed the firing button and spurt after spurt of red tracer bullets rose into the sky.

Five rounds of tracking fire at different altitudes and speeds prescribed red arcs in the night sky.

Twelve rounds of sine-shape tracking fire and trajectory of tracers in the sky produce a beautiful S shape in the sky resembling a wild dance of golden dragons.

Our feelings run high on this gorgeous night. Oh Great Northern Wilderness! You are not only a treasure house of the motherland's petroleum; you are also the place in which "weapons blossoms" bloom.

With the development of technology, conventional weapons have entered a new stage. Officers and men at the base have focused on advanced world standards and have advanced into the technology realm of conventional weapons testing.

The base welcomes with open arms all experts, academicians and college graduates with a desire to build national defense to come here to contribute their own knowledge and skills. The future of the conventional weapons testing base belongs to you!

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OLD, NEW WEAPONS COMBINED ON FUTURE BATTLEFIELD

Beijing JIEFANGJUN BAO in Chinese 19 Jun 87 p 3

[Article by Shi Zhaoyu [4258 2507 3768] and Lu Song [0712 2646]: "New, Old Weapons Will Still Be Used Side by Side in Future Operations"]

[Text] In any era, it is difficult for any one weapon to dominate the battlefield. In the wars of the future, no matter what new-type weapons appear, the situation in which new and old weapons are mixed and used side by side will still exist for a long time.

Mankind's history of war is also a history of the mixed use of new and old weapons side by side. This, in essence, was shown incisively and vividly as early as before World War I. At that time, the main force bestriding the battlefield--cavalry--although using the advanced gunpowder weapons instead of the backward bow and arrow, the king of the "cold weapons"--the saber--was still an extremely effective and convenient close-quarter weapon in the hands of the cavalryman. Our ancestors "magnified" the gunpowder weapon and got the large-bore cannon, which swiftly increased the power of weapons. However at this time were guns most willing to be melted down and cast into cannon? No! A cannon is large and heavy, and its movement is often restricted. Thus, the cannon and the gunpowder weapons inevitably complemented each other.

In modern wars, the effect of the mixed use of new and old weapons is more evident. The seriation and high efficiency of the new-type air defense missiles have forced the air overland, which in former days roamed leisurely and carefreely in high and medium altitudes--the airplane--to lower itself to low and minimum altitudes in search of its own range of security. Therefore, as weapons the antiaircraft artillery series have become effective executioners at low and minimum altitudes. In the sixties, on the Vietnam battlefield, the U.S. Air Force was once extremely superstitious about the new-type air-to-air missile, which was an advanced weapon then, and it removed machine cannons from its aircraft. The result was that in close-range dogfights, its aircraft often wound up in a passive position and took a beating. Faced with this bloody lesson, the U.S. Air Force could only hastily reequip its aircraft with machine cannons.

That new and old weapons are regularly mixed in use is because the two often each have their own strong and weak points, and thus they must complement each

other. During the Malvinas Islands War between Britain and Argentina, an Argentine "Exocet" missile sunk a British destroyer at one stroke, but in the Falkland Strait, which is narrow and densely covered by search radar, the effect of this kind of missile was greatly reduced. In the Malvinas Islands naval war, the Argentine armed forces sunk 16 British warships, 14 by ordinary bombs. The veteran in the arsenal--the land mine--is still used, and it is an effective weapon that causes damage over a large area and is most convenient and most inexpensive. From this it can be seen that, under certain circumstances and conditions, new weapons have their weak points and old weapons have their strong points. Under different weather conditions and different terrain and surface feature conditions, the two complement each other, thus making it possible for new and old weapon systems, in an environment suited to each one's nature, to give free play to each one's "magic power."

In a future war, the mixed use of new and old weapons will be the best method for giving full play to each one's quantitative and qualitative superiorities. When we have a large quantity of weapons, we can get the opportunity to strike many times. If the weapons are of high quality, we can get very big results at the lowest cost. Of course, technical superiority can make up for insufficient quantity, but if quality is overstressed, the quantitative aspect will float to the surface, and the technical superiority could, faced with quantitative superiority in ordinary weapons, appear weak. In the long, never-ending Iraq-Iran War, the new-type long-range attacking weapon systems are restricted in quantity, and often they can only be used symbolically, and the quantitatively superior ordinary weapons become the main force on the battlefield.

The combination of new and old weapons is not a bipolar simple coexistence; it includes a "welded part" of the two--the use of a large number of improved-type weapons. In improving an old weapon, the period is short and the cost low. The "catalytic effect" of new technologies can swiftly give it trans-era functions, and thus the improvement in the weapon's performance can keep up with the needs of the military and avoid the occurrence of a temporary shortage in weapons.

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IMPORTANCE OF RESEARCH ON 'BOUNDARY ZONES'

Beijing JIEFANGJUN BAO in Chinese 3 Jul 87 p 3

[Article by Li Gui [2621 6311]: "Breaking Out of 'Boundary Zones'"]

[Text] Currently, the rise of frontier sciences has given us an important inspiration: to accelerate the modernization of national defense, we must put more effort on the "boundary zones." This is because, among the military sciences, on the one hand in those things that were originally in opposition to each other there has appeared a tendency for them to become compatible. For example, "counterassault" and "resistance to counterassault" originally respectively belonged in the categories of defensive and offensive operations. At present, because of the widespread use of new technologies and new weapons, and the improvement in battlefield mobility, in long-distance attack capability, and in large-scale lethal capability, the possibility of one type of operation directly switching to another type of operation has greatly increased. Therefore, the characteristics of "offensive warfare while on the defensive" and "defensive warfare while on the offensive" will become increasingly prominent. On the other hand, because of the fact that the level of people's research has been raised and the space of their activities has been enlarged, the original "interval" between one thing and another is gradually being "magnified" on the plane and in three dimensions. Speaking of weapons and equipment, because theater weapons are constantly developing in the direction of being "high-grade, precision, and advanced," the "firepower gap" between theater weapons and tactical weapons is growing markedly.

However, from a look at the present situation, the "boundary zone" has not attracted sufficient attention. No matter whether in macro strategy and high-level theory or in equipment and technology and specific ways of fighting, the "boundary zone" is still a weak position. Its main manifestations are:

In the development of weapons and equipment, people lay stress on the leap from tactical weapons to theater weapons, but they do not give proper attention to the theater and tactical weapons that fill the "boundary zone" between tactics and theaters. Speaking of ground firepower, the firepower gap between tactical cannon on the one hand and theater and tactical missiles on the other has not yet been closed.

In operations theory, explorations and demonstrations of either "offensive" or "defensive" are very enthusiastic, but those who have set foot in operations theory with regard to the compatibility of offense and defense are very few.

In addition, theories on "boundary zones" in such fields as strategic and campaign studies, tactical and campaign studies, and training management studies is still "virgin land" that has not yet been put under cultivation.

A "boundary zone" is a material point of a special contradiction. It possesses a clear general compatability, and it also can, through a synthesis of the strong points of the two sides, "close" itself; what is more, it has a strong uniqueness, and neither of the sides can simply replace it. Taking operations theory as an example, no matter how perfected campaign studies and tactical studies become, neither of the two can simply replace the study of both campaigns and tactics. Therefore, no matter whether we are designing the national defense development strategy and planning the goals of armed forces development, or are exploring the theory of future wars, we should pay sufficient attention to the "boundary zones."

Just like the fact that frontier sciences can make a new synthesis among many sciences, in studying "boundary zones" we must keep in mind the entire national defense system. In this large-scale system, no matter whether in theory or practice, that kind of practice with a lateral "interface" and a vertical "fault" not only impedes the development of things themselves, but also adversely affects the functioning of the entire system.

We should see that there are broad prospects for development in our "boundary zones." Especially following the development of frontier sciences, the "fuzzy theory" is gradually being accepted by people. That kind of "unequivocal" thinking method in which there is a "border between the opposing powers," and in which "things are entirely different," obviously is already unable to completely meet the needs of national defense modernization. For this reason, we need, from theory to practice, "to make good omissions and deficiencies." It is said that in recent years, the U.S. Armed Forces once had the idea of abolishing the Air Force in order to strengthen the construction of the air arms of the Army and the Navy. This cannot be said not to be a bold idea to "close" the "gap" between the Army, Navy, and Air Force. Also, in research on military theory in recent years, there has appeared the spectacular "intermediate level" theory, which also arises from the idea of the "boundary zone." With regard to exploring the theory of warfare, people have changed the viewpoint of only doing research in general terms on modern warfare from the angle of nuclear wars and conventional wars, and have put more stress on separating out in their research the popular topics of limited wars, local wars, special wars, sudden incidents. All of these things, speaking in a certain sense, have the aim of either doing away with the interval between "sects" or filling the gap in the "interface."

In brief, the enhancement of research on "boundary zones" is a fundamental requirement for national defense modernization. Now, in the largest sense the formulation of national defense development strategy and in the smallest sense the formulation of battle decisions, people are seeking the advantageous border parameter between one theory and another in order to grasp the optimum "point of attack."

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ADVISORY ROLE OF STAFF OFFICERS DISCUSSED

Beijing JIEFANGJUN BAO in Chinese 3 Jul 87 p 3

[Article by Yang Yingjiu [2799 2019 0036] and Wan Jianzhong [5502 1696 0022]:
"Staff Officers Must Dare To Admonish"]

[Text] Comrade Chen Yi once said: "Staff work is of decisive significance for victory or defeat in battle." This sentence points to the importance of staff work and to the qualifications staff officers should possess. Besides having fairly high political consciousness, policy level, military quality, and educational accomplishments, staff officers should have the fine style of daring to admonish superiors at critical moments. We think that this last point is especially important, but also difficult to achieve. For staff officers to have the courage to admonish, besides objectively requiring efforts to improve the relations between the higher and lower levels and the establishment of an atmosphere of democratic consciousness, the staff officers need to strengthen themselves in the following three points:

They must have real ability and learning. If a staff officer has broad and profound knowledge, a solid foundation in military theory, and consummate professional skills, and also possesses a rich imaginative faculty and keen powers of observation and judgment, he will be able to make correct suggestions to his senior officers. Especially when he discovers that a senior officer has made a decision that does not tally with the actual situation, he will be able to timely set forth penetrating judgments that will be sufficient to make the senior officer correct his decision and thus avoid causing unnecessary losses. For example, after the end of the war to resist U.S. aggression and aid Korea, a certain unit was stationed on defense on the Liaodong Peninsula frontline. One day the operations duty section received an emergency report from a unit at a forward position, which said: A motorized sailboat is approaching us from a certain direction at sea near China. The section immediately passed the report on to the higher level's operations duty section. After the senior officer at the higher level had received the same situation report twice, on the one hand he instructed the aviation corps to prepare for action and the artillery to prepare to fire; and on the other hand, he instructed that the situation be further verified, but the duty senior officer of the unit stuck to his original report. At this moment of imminent peril, the deputy section chief, a probationary staff officer, suggested that the lower level's report could be in error, and that after

becoming clear about the situation another report should be sent to the higher level. His reason was that on this day the clouds were low and the mist thick, the winds were high and the waves surging, and at sea visibility was low and observation dim. If the other side were really making a move, it would not do so with just one boat; the boat could have lost control because of a machinery breakdown and was drifting with the wind toward us. Later, a detailed report confirmed this staff officer's judgment, and a serious situation was averted. Obviously, if this staff officer had not had a certain amount of policy ideas, meteorological knowledge, and navigational knowledge, and especially the capability for making a comprehensive analysis and judgment, he could not have come up with the abovementioned judgment.

They must regard the interests of the state and the people as most important, and must keep the public interest in mind. Proceeding from the interests of the state and the people is the ideological basis for being courageous in advising, and is also the underlying objective of admonishment. The aim of advice is to help the senior officer make the correct decision so as to insure victory in military actions; protecting the interests of the state and the people will avoid inappropriate losses to the state and the people. Thus a high degree of dedication and sense of responsibility should be established, so that at a critical moment the staff officer will uphold principle for the sake of the people's interests.

In addition, they must boldly maintain their own judgments. If a staff officer has penetrating judgment but does not keep the public interest in mind, he cannot give advice in the spirit of seeking truth from facts. If he has penetrating judgment and keeps the public interest in mind, but does not have the same spirit in boldly speaking out and persisting to the end, he cannot turn his penetrating judgment and his desire to protect the interests of the state and the people into reality. Upholding correct opinions requires a certain amount of courage. Of course, in stressing boldness in giving advice, we do not deny that the staff officer must pay attention to the art of advising and do all he can to get the principal officer to accept the advice.

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NDSTIC AUTOMATED COMMAND MANAGEMENT NETWORK

Beijing JIEFANGJUN BAO in Chinese 17 Jun 87 p 1

[Report by Fu Mingchang [0265 2494 1603]: "Successful Development of NDSTIC Automated Command Management Network"]

[Text] The National Defense Science, Technology, and Industry Commission [NDSTIC] network system for command management and office work automation, which was developed by the NDSTIC's General Research Institute for Testing Communications, was technically certified at the ministerial level today in Beijing.

The network system is a regionwide network system that can link up the entire country, and can even link up a bigger range. The cross links of this system make the transmission of information timely and handy within each region as well as between regions. It will be used for missile launches, satellite survey and control, and spaceflight command; it will greatly enhance the degree of command automation. With the development and use of this result, the dispatching and transmitting time between users is cut to the millisecond level. The units can use it to exercise precise control over the military command system; in national economic construction, it can be used to carry out precise control, management, and monitoring.

In a briefing, a figure concerned said that one striking characteristic of this system is its high adaptability. Large, medium-sized, and small computers can be incorporated into the on-line network. Also, it can input and process Chinese characters. Thus, the resources of any one main computer's hardware and software are shared.

Experts think that the system's performance is in a leading position among products of the same type in China and abroad, and that it is a regionwide, Chinese-character computer network at the world's advanced level. Its successful development not only makes a contribution to the units' command management and office work, but also is of fairly high value for use in every domain of national economic construction.

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GROUP ARMY'S PROBLEMS IN BUYING, OPERATING COMPUTERS

Beijing JIEFANGJUN BAO in Chinese 25 May 87 p 1

[Article by staff reporter Shi Wenting [0670 2429 0080]: "Joy and Sorrow After the Micromputer Joined the Army--Excerpts of a Talk by He, Commander of a Certain Group Army"]

[Text] The protagonist in this talk--He [0149], commander of a certain group army in the Shenyang Military Region--as early as 2 years ago when he took up his present post, obtained a course completion certificate in the computer speciality from the Commercial College of Heilongjiang Province. Among the high-level commanders, he was the quickest to master microcomputer technology and apply it to the command domain. Over the past several years, under the initiative, leadership, and organization of Army Commander He, in the number of microcomputers, in the contingent of talents who have mastered the microcomputer, and in the scope and level of sophistication in the development of software programs, this group army has placed at the top of the list in the ranks of group armies. The PLA General Staff Department has several times introduced and popularized the group army's experiences in this respect. Army Commander He has many feelings and considerable insight with regard to the development and application of the microcomputer. Here we will provide our readers with the highlights of a live recording of his talk on the computer question in the hope that it will give them food for thought.

When I went to see Army Commander He, I had not prepared a clear outline beforehand, and I just wanted to have a rambling chat. Perhaps his head would be so full of computer questions that, after exchanging a few words, he would turn his tongue to the micromputer question. Therefore, I switched on the taperecorder.

"Since Chairman Deng took charge of the work of the Military Commission, especially after he set forth the clear view that we must 'be geared to modernization and be geared to the future,' the pace of the units' modernization may be summed up in two words: 'big' and 'fast.'

"In the past several years, micromputers have joined the army in batches and have gone into the units. Almost every group army has a fairly high grade contingent of talented persons who understand both computers and military affairs, and various kinds of software in the field of command automation have

sprung up like bamboo shoots after a spring rain. The widespread application of the microcomputer has greatly spurred the rate of automation in the PLA's command and management. This is a point worthy of pride in the excellent situation in the building of the PLA." (In this part of his talk, he cited with zest a large number of examples, but because of space limitations I had to reluctantly cut them out.)

"The microcomputer plays an important part in the PLA's modernization. Therefore, to deploy, develop, and apply the microcomputer well is an important matter that cannot be delayed. Some data say: 'Computers and computer systems are widely applied in the U.S. Army in management and information processing. The U.S. Army now has about 540 data processing centers, which use more than 140 kinds of software (program) systems. The U.S. Army has gradually put its focus on combat command automation.' Now, although our financial resources are limited, we should do our best in this respect. We should not grudge spending the limited funds on this 'crucial point.' In the past several years, we have adopted the methods of broadening sources of income and reducing expenditure, integrating the leadership with the rank and file, and jointly raising money. From production results and labor income we squeezed out more than 3.5 million yuan and put into automation. At present, automation work stations have been established, and more than 120 software applications (programs) have been developed; also, there are long-range command and management systems, microcomputer military operations simulation training systems, and office work automation systems.

"However, for us, the computer after all is a new toy, and many problems urgently await solution, for example:

"--The problem of 'unity' in automation. There is now a lack of a macro-guidance 'main switch.' I have heard that the situation in automation is like that of the 'Eight Immortals crossing the sea, each one showing his or her special prowess.' It is a little like the time in 1958 when there was widespread iron and steel smelting, with its atmosphere of 'fires being lit in village after village and smoke rising in all directions,' and when there were no authoritative departments to do the work of 'unification.' Therefore, provided there is money in hand, if one wants to do something then one does it. You buy this kind of microcomputer and I buy that kind of microcomputer; you use this software and I also use this software; you find this knack of doing things and I find that knack of doing things. The paces differ, the microcomputer types differ, and the ways of doing things differ. There can be no mutual comprehension and no mutual exchange, a situation that causes much duplicative development and frequent detours. What is more important is that it will cause a lot of trouble to future macro on-line networks. In the past several years, we have spent a little over 50,000 yuan in research and development funds on all projects. If had had a 'unifying' department, this money could have been saved.

"--The problem of talented persons who have mastered the microcomputer. In the units there are not talented persons working with microcomputers, but they are lame: those who understand computers don't understand military affairs; those who understand military affairs don't understand computers. Because of the lack of dual-type talented persons, there are difficulties in developing

software (programs), and many microcomputers cannot handle important matters and can only be used as typewriters. Again, there was no source for channeling talented persons who understand the microcomputer, and we only depended on ourselves to think of ways to 'dig' them out everywhere, or everywhere we 'burned joss sticks and worshipped Buddha' to get the help of others in apportioning the talented persons. If the armed forces' colleges and schools can solve this problem, it will be a good thing.

--The problem of the commercialization of software development. Because the units lack high-quality talented persons who understand the microcomputer, the majority of the units cannot develop by themselves some high-grade software, and, when necessary, they have to go to relevant units to get support. Asking for help means that money must be paid out, and the asking price is getting higher and higher. Because the state now does not have list prices for various software, there is a great deal of willfulness in raising and lowering prices. Some units even go so far as to demand exorbitant prices. The units' financial resources are limited, and sometimes they have to tighten their belts in order to buy software.

--The problem of funds. There were often a great number of items falling in the category of microcomputer development, and the funds divided up and sent to the units were stipulated not to be spent on automation. From what we understand, in this important matter of automation we must "clench our fists" when using funds. If extend our scope of spending money and 'sprinkle pepper' everywhere, it will be very difficult to achieve automation.

--The problem of the difficulty in maintaining microcomputer hardware. Many large units have microcomputers. Following the passage of time, with the wear and tear on them, their parts will be damaged. At present, many parts cannot be bought, and when a microcomputer goes bad it is not easy to repair it. When a small part in some computers goes bad, the operator must stop using the computer until it is fixed."

What Army Commander He said struck a sympathetic chord in me, because at the editorial department I constantly receive letters from some readers calling for the solution to these problems as fast as possible. I felt that it would be very difficult to solve some of these problems, so during his talk I showed signs of embarrassment. Army Commander He seemed to read my mind. He stood up, and while pacing back and forth said confidently: "Automation is a new topic. In the past several years, we have able to make some strides in it, and our understanding from experience may be summed up in one word: strive. Without striving there is no success."

After the conclusion of my coverage of this story, I heard that the group army was at that moment cooperating with the National Defense University in tackling key technical problems to fill two gaps: the group army's model for campaign operations; and the radio on-line network under field conditions of the microcomputers in the organization of the group army's divisions. It is reported that initial results have been achieved and success is within sight.

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COMPUTERIZED COMMUNICATIONS IN SHENYANG GROUP ARMY

Beijing JIEFANGJUN BAO in Chinese 30 Jun 87 p 1

[Report by Zhang Shusen [1728 2885 2773] and Du Shoulin [2629 1343 2651]: "A Certain Group Army Achieves Microcomputer, Radio On-Line Network Communications"]

[Text] A "long-distance radio on-line communications network of microcomputers under field conditions" has obtained successes in a certain group army of the Shenyang Military Region. This indicates that major progress has been made in the development and application of the microcomputer in training and in command automation reform.

Before dawn on 17 June, in a certain mountain area in the Northeast, a mobile offensive campaign exercise was being carried out by a combined arms group army. When we writers walked over to the command post, which was screened by green trees, we did not see the typical scene of the past--telephones ringing and staff personnel shouting--but instead saw intense work by computers, facsimile machines, and duplicating machines. At the side of computers that were responsible for long-distance radio communications, we saw them send operational dispatches to the rear command post. At this time, the headquarters, political, logistics, and technical organizations began intense but orderly synchronous operations. The computers used data to transmit by radio Chinese characters and diagrams, with fast speed, large coverage area, and strong security. Their superiority made people look at them with increased respect.

We left the operations room and drove to the rear command post, which was more than 20 kilometers away, where we saw this stretch of high mountains and dense forests. In the microcomputer room, Engineer Lu Ming [0712 2494] said: If we were to use microcomputer wired on-line network communications, the units' capability for rapid reaction would be adversely affected. Under field conditions, the radio on-line network communications with microcomputers are not restricted by time, space, and various terrain conditions, and communications and command can be effected while on the move. Therefore, this kind of communications can better serve training and future wars.

9727

CSO: 4005/933

IMPORTANCE OF COASTAL WATERS, NAVAL DEFENSES

Beijing JIEFANGJUN BAO in Chinese 29 May 87 p 3

[Article by Chen Fangyou [7115 6078 0645], Xu Xikang [1776 6932 1660] and Huo Xiaoyong [7202 1420 0516]: "Need For An Ocean Outlook Among Military Personnel"]

[Text] Ever since mankind first used an oar to break the surface of the boundless expanse of blue waters, the vast oceans that occupy 71 percent of the earth's surface have become a major arena on which mankind depends for his sustenance and development. As society developed, the oceans came to play an increasingly important role in all aspects of the country's political, economic, military and social activities. Since the beginning of the 1970's, in particular, oceanography has scored unprecedented advances that have made it one of three major scientific realms, ranking with atomic energy science and space science.

Ours is a large country bordering on the sea, whose coastline (including the coastline of ocean islands) totals more than 32,600 km in length, or more than 10,000 km longer than its land border. According to the provisions of international maritime law, "maritime territory" under China's jurisdiction (including inland seas, territorial seas, continental shelf and exclusive economic zones) totals approximately 3 million square kms.

The Chinese race has a long history in conquering the oceans. The magnificent feat of Zheng Heqi in visiting the western ocean back in the 15th century is regarded with admiration throughout the world. But, as a result of the long closed door policy of the feudal ruling class, exploitation of the oceans and ocean defense have waxed and waned, and have sustained numerous setbacks during the past 100 years. This was an important historical source of damage for China's position among the powers of the world. Following founding of New China, both the Party and the state devoted a high degree of serious attention to ocean affairs, China's maritime endeavors seeing fairly rapid development as a result.

Ocean defense is an important integral part of national defense. As military men, we must have not only a land outlook, a space outlook, but an ocean outlook as well. By a so-called ocean outlook is meant a basic view of the position and role of oceans, and particularly a clear understanding of the

correlation between ocean politics, ocean economics, and ocean military affairs and the national interest.

Ocean Politics

Ocean politics is essentially a reflection of ocean rights and interests. The ancient Greeks and Romans regarded the oceans and seas as being "without sovereignty." It was not until the 9th century that nations began to call for sovereignty over the seas. With the birth and development of maritime countries in the 15th century, a struggle over ocean rights and interests began. Specifically, once certain naval powers, and particularly super powers, relied on the dominance of their ocean development skills and their military power on the sea in the wanton pursuit of power politics, the struggle between the infringement and maintenance of maritime rights and interests became increasingly intense. In order to protect their own interests, numerous coastal countries raised questions regarding jurisdiction over resources in areas contiguous to their coasts and the continental shelf. In 1972, African countries suggested establishment of exclusive economic zones. These proposals and requirements were recognized with passage on 10 December 1982 of the "Law of the Sea" during the Third United Nations Conference on the Law of the Sea at Montego Bay in Jamaica [as published]. However, infringement by some countries of the maritime rights and interests of other countries did not disappear as a result of this. China has a vast coastal area and territorial seas, and countless islets containing abundant resources. Some countries that covet the resources on China's continental shelf and exclusive economic zones have illegally intruded into China's ocean areas to conduct fishing and petroleum prospecting, and they have even gone so far as to brazenly dismember and occupy China's islets. Some countries also seek to grab as their own two-thirds of northern bay and ocean realms. Faced with this situation, we must bolster our awareness of the oceans, look at them in terms of national rights, interests and ocean politics, and give close attention to the struggle over ocean rights and interests, resolutely guarding China's ocean rights and interests and ocean resources, and making a contribution to realization of the motherland's unification and prosperity, to opposing hegemony, and to safeguarding world peace.

Ocean Economics

Mankind's understanding of the economic value of the oceans has deepened with the development of oceanography. During the 1870's, the British Royal Navy ship, "Challenger" conducted the first systematic exploration of ocean physical, chemical, geological and biological properties. Contemporary exploitation of petroleum in the oceans and of ocean minerals has formally raised the curtain on mankind's large scale advances toward ocean resources. Today, when continental resources are becoming increasingly depleted, the rich oceans present to mankind magnificent and bright prospects for development. Surveys show 80 percent of the earth's material resources to be located in the oceans, with more than 200,000 different varieties. In a situation of ecological balance, the oceans can provide more than 200 million tons of fish annually, which is more than 15 percent of mankind's requirements for animal protein. Eight percent of chemical elements may be found in the oceans. Reserves of uranium alone amount to more than 4 billion tons, or 4,000 times

the reserves found on land. Total reserves of ocean energy are equal to more than 1,000 times the amount of energy required for the growth of all animals on earth. Petroleum reserves on continental shelves total 250 billion tons, or one-third of continental reserves. Reserves of manganese, copper and cobalt in the oceans amount respectively to 200, 600 and 3,000 times land reserves.... American futurist, Toffler has noted that, "In a hungry world, the oceans are able to help us solve the most difficult food problems."

History has shown the development of countries bordering the oceans to have had a natural relationship with the oceans. The rise and development of human civilization took place mostly along the seacoast. Nations engaged in development of the oceans entered the ranks of economic powers earlier than other countries. Seven of the contemporary world's 10 largest modern cities are located along the seacoast. The United States, which has been termed the "golden empire," has used development of the oceans to secure "gigantic profits from a small investment."

Ours is a land with a huge population but in which land resources per capita are by no means abundant, and this has impelled reliance on the ocean economy. Ours is a large country bordering the sea with a definite foundation for ocean science and technology and capacity for its development, and in which conditions exist to make use of the ocean economy and to develop maritime enterprises. In today's world in which the center of world economic development has gradually shifted in the direction of the oceans, there is no doubt that we should make development of the ocean economy a basic national policy.

Ocean Military Affairs

Ocean military affairs have always received serious attention from countries bordering the seas. Colonialists and hegemonists used the oceans to carry out their policies of plunder and contending for hegemony, and peace loving countries used them to resist being plundered, to resist coming under control, and to safeguard their own just rights, interests, and national security.

Armed forces on the sea are the backbone for development of maritime power. Today, the development of ocean military affairs has the following striking epochal characteristics:

First, the center of strategic nuclear force has shifted from the land and air to the seas bringing about a qualitative change in the significance of developing maritime power. Statistics show that 36.3 percent of the United States' total strategic nuclear force (70 percent of all its warheads) and more than 40 percent of the USSR's total strategic nuclear force have been deployed in the oceans' depths. This trend shows that the traditional concept of warfare of "using the land to control the seas" is being shaken. Maritime power will play a more important role in warfare overall.

Second, with the advent of long range weapons and increase in the threat from the seas, national concepts of the oceans as strategic frontiers must be updated. Gaps in the development of maritime power have become wider, and

prospects for development are more "multi-dimensional" and "extensive" than for the land and air gaps in military power.

Third, the navy is a technology intensive, knowledge intensive and skilled personnel intensive service that has been hailed as the epitome of a nation's modern industry and level of advanced science and technology. Countries bordering on oceans also take the lead in applying the newest technology and the newest scientific research achievements to their navies. For this reason, the level of development of maritime power serves as an objective indicator in judging a country's overall national power.

Fourth, the development of maritime power can produce an enormous "proliferative role" in advancing development of the national economy. In today's world, only through the development of maritime power is it possible to gain security and a peaceful ocean environment. Consequently, the degree to which maritime power is developed will have a direct bearing on potential for and results achieved in development of the ocean economy.

The foregoing analysis shows that the safeguarding of ocean rights and interests, and development of the ocean economy is not just a real need in the building of a powerful socialist country, particularly in the enduring cause of bringing benefit to posterity. In thinking about and carrying out the building of national defense in a new age, our field of vision cannot be limited to the land and the air.

5432

CSO:4005/812

ROLE OF 'SUB-NUCLEAR, SUPER-CONVENTIONAL' WEAPONRY

Beijing JIEFANGJUN BAO in Chinese 24 Apr 87 p 3

[Article by Liang Yanning [2733 1750 1380] and Zhang Hong [1728 1347]: "Be on Guard Against Sub-Nuclear, Super-Conventional Warfare"]

[Text] The deepgoing development of the new technological revolution spurs a large number of new weapon systems to show their talents, so that they not only possess destructive nuclear weapons and their means of delivery, which perform the function of stopping the outbreak of a big nuclear war, but at the same time also possess independent destructive efficacy and provide means for new forms of warfare. We call these new weapons, which have less lethal mechanisms and destructive efficacy than nuclear weapons but which greatly exceed conventional weapons, and which use new technologies (like microelectronics, lasers, directed energy, electro-optical remote sensing, and "smart" technologies) "sub-nuclear, super-conventional weapons." We call wars that make use of these new weapon systems "sub-nuclear, super-conventional wars." Their emergence provides people with a new choice of a level interposed between nuclear war and conventional war, expands the field of vision in warfare, and draws people out of the nuclear plight toward a new field of activity. This kind of war will make it unlikely that the country that starts a war will cause an overall conflict between the belligerents, will not affect the total international strategic structure, will not mean the taking of a big risk, will not cause huge materiel consumption and economic pressure, will not cause a devastating calamity, and will not leave behind lasting "sequelae" that will be difficult to overcome and that will endanger mankind's existence. Thus, in my view, a sudden attack on selected targets and areas will swiftly achieve political and military objectives.

Compared with nuclear war and conventional war, sub-nuclear, super-conventional war has the following characteristics. First, it is a war with a lot of power, but its range of destruction is small, a fact that is advantageous for controlling the scale of the war and the extent of its impact. Second, the forms used are flexible and varied, attack and defense are integrated, and various strategic, campaign, and battle missions can be carried out. Third, the degree of intelligence is high. The means of war have gone from manpower and mechanization to automation and intelligence. Some new weapons possess the functions of "listening and understanding speech" and "distinguishing the enemy from ourselves." Fourth, it has an extensive

antipersonnel function. Not only does it possess a "lethal antipersonnel capability," which directly inflicts casualties on the other side's effectives and destroys weapons, equipment, and engineering facilities; it also possesses a "nonlethal antipersonnel capability," which can directly blind and burn, cut communications, put military command out of order, and put weapons out of control. Besides all this, it possesses many new antipersonnel potentialities. Fifth, it has a large element of surprise. Preparations for war are made more quickly, the war is waged quickly, and the war ends quickly, all of which is convenient for fighting a quick war to force a quick decision and swiftly attacking a large number of targets, so that the enemy is often taken by surprise. Sixth, the war produces big results.

With its superior "properties," sub-nuclear, super-conventional war will display its skill to the full in future wars and become a new generation of war's proud favorite.

9727

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SHIP-LAUNCHED MISSILE SIMULATOR DEVELOPED

Beijing JIEFANGJUN BAO in Chinese 23 Jun 87 p 1

[Report by correspondents Zhang Zhe [1728 0772] and Huang Qiguo [7806 7871 0948]: "Two Political Cadres Develop Ship-Launched Missile Simulator"]

[Text] Following the rise from the sea of a reddish orange smoke cloud, the "ship-launched missile simulator," which was urgently needed for the Navy's training, was finally born. In this test at sea, two other pieces of training equipment--the "antisubmarine rocket simulator" and the "sea mine floating detector"--appeared. All three pieces of equipment were successfully developed by Bi Gong [3968 0434], deputy chief, and Bi Shaowu [3968 1421 2976], mass united front work secretary, of the political office of an engineering machinery installation regiment of the Shenyang Military Region.

The two men were commissioned to do this research in September of last year by the Naval Surface Vessel College. It is reported that for a long time, because the cost of manufacturing ship missiles is expensive--the cost for one missile being several hundreds of thousands yuan--the great majority of missile operators, from the time they joined the service until the time they were demobilized, never fire a live missile.

The Navy's test showed: These three pieces of simulation training equipment can simulate fairly well the performance of weapons and equipment. In particular the ship-launched missile simulator not only can simulate the trajectory and distance of a live missile, but also has operating movements and check signals like a real missile. Even the smoke and flame emitted and the sound of a hit are extremely lifelike. The manufacturing cost of a missile simulator is only 0.05 percent of that of a real missile.

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NAVY TRIES TO RETAIN EXPERIENCED CADRES

Beijing JIEFANGJUN BAO in Chinese 29 Jun 87 p 1

[Article by Zhang Ming [1728 7686]: "Navy Takes Measures To Retain Ship Cadre Backbone Elements"]

[Text] "When talents rise up, military luck flourishes; when talents are numerous, military power is boosted." Over the past several years, there has been a very big improvement in the Navy's military training, and one important reason is that the Navy has retained a group of military technical talents. Every time this subject is discussed, the Navy's leaders always sigh with emotion: This is a path that lessons forced us to take.

The Navy is an armed service in which technology is complex and knowledge is concentrated. The cultivation of talents is a long-term piece of systems engineering. Taking only the captain of a guided missile destroyer for example, his ship has several dozen specialities and several dozen battle stations. A qualified captain must possess the specialized knowledge of each department of the ship, understand tactics, be able to command, and be able to operate the ship; in organizing training, management, logistic support, and equipment maintenance, he must be a professional. To train a qualified captain, about 20 years' time must be spent and a price of more than 10 million yuan must be paid.

For a variety of reasons, captains cannot be retained by "piling up" money. In the past several years, a rhyme has spread among the sailors: "The captains are on a merry-go-round, the crews drill along with them; in all things they start from the beginning, and year after year it is the same old countoff--one, two, three."

These problems have drawn a high degree of attention from the Navy's leading comrades. At a meeting of the Standing Committee of the Navy CPC Committee, a principal leading comrade of the Navy said seriously: "Ship captains must never again get on the merry-go-round; retaining talents means insuring combat effectiveness. On this question, there cannot be the slightest misunderstanding, and it must be regarded as a matter of political discipline! We must make it a rule to retain experienced ship captains!"

A joint document drafting team, with the purpose of retaining talents, was swiftly set up. The team members went into the units, where they made many-sided investigations and listened to opinions. From a look at the data collected, there were two main reasons for some military technical talents not remaining: first, with regard to making use of ship captains, there existed among leaders at all levels an attitude of doing as they pleased, a lack of long-range plans, and the habit of letting them pass in and out without order; second, some ship captains in age are "over the hill" or about to be "over the hill" and if they don't leave it will be impossible to dispel their fear of troubles back at home.

On the basis of thorough investigation, the document drafting team made a special study of the "age and job structure of foreign naval officers" and of some Chinese historical materials. After many-sided demonstrations and repeated deliberations, and in integration with the Navy's own reality, a document entitled "Temporary Provisions for Enhancing the Building of the Military Cadre Ranks in Ship Units" was produced. The document stipulates: After a ship (boat) captain has been in his post for a certain number of years, unless there are special circumstances, he may voluntarily change posts; "captains of training ships and boats" have been added to the establishment; and there is an additional allocation of professional chief posts at all levels in the Navy. The personnel posts that have been added to the establishment or additionally allocated have been reported to the PLA General Headquarters for formal incorporation into the Navy's establishment and battle order. The posts can be set one level higher, and the years of active service in the past will be appropriately extended.

In the ship units, a large number of military backbone elements have been retained. In recent years they have played an active role in military training and the fulfillment of various missions. These veteran ship captains and professional chiefs who have been retained have abundant practical experience, and they are an integration of the higher and lower levels, so that the Navy has set up a perfected training outline and various rules and regulations, and in military training there is gradually being achieved a regularization of the system, an alignment of content, and a standardization of requirements. After the streamlining and reorganization, there are few deputy posts left. Those training ship captains who have been added to the establishment have become the organizers and directors of long-voyage training. In last year alone, three fleets organized, one after another, certain ships (boats) to carry out long-voyage training. The captains and professional chiefs on the training ships help the sea formation commanders to exercise command, leading to new breakthroughs in the content, time, and sea areas for training.

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NAVY SELECTS PILOTS FOR TRAINING AS SHIP CAPTAINS

Beijing JIEFANGJUN BAO in Chinese 26 May 87 p 1

[Article by Correspondent Si Chanwen [0674 1750 2429]: "Navy To Select Naval Vessel Captains From Among Pilots; Will Be Able Both to Pilot Planes Into the Sky and Command Ships Putting to Sea"]

[Text] Naval aviation is about to have 10 young and outstanding pilots "descend" from the boundless blue skies to a surface naval vessel academy. After 3 years of advanced studies, they will become the first generation of naval vessel captains in the People's Navy that both understand naval vessels and flying. This marks the entry to a higher level for the Navy's training of modern combined commanders.

The correspondent read the following in the 11 May notice on enrollment of cadets into naval schools during the autumn of 1987: The Navy has newly established a surface ship tactical command class in a certain school, and 10 outstanding pilots under 30 years of age who have a college education and who have flown for 3 years will be selected from aviation units to enter this class for study. Classes will commence on 1 September 1987. During the course, they will first study how to command a naval ship unit followed by study of how to be a naval ship captain. They will also devote a certain amount of time to flying and to shipboard exercises.

Modern naval warfare consists of coordinated warfare in the boundless sky, the sea, and beneath the sea using submarines, surface ships and airmen, and there is no doubt that this poses higher quality and skill requirements for naval commanders. Among skilled naval personnel in developed countries today, many are versed both in naval vessels and in aviation. This is particularly true for commanders of aircraft carriers, many of whom have been pilots. Senior naval officers have borrowed from the experiences of foreign armed forces to focus on modernization and long range development of the navy. Beginning in 1986, they frequently proposed the idea of selecting pilots for training as naval vessel commanders.

Comrades in charge in the Navy Cadre Department and in the Navy Academy Department told the correspondent: "The selection of navy ship commanders from among pilots is an experiment. How to insure that these comrades will grow into their jobs will have to be constantly and actively explored. We are fully confident."

IMPROVED ASCENT PARAMETERS SAVE JET FUEL

Beijing JIEFANGJUN BAO in Chinese 6 Jun 87 p 1

[Article by Dong Qingjiu [5516 1987 0046]: "Air Force Research Produces Optimum Ascent Path For Five Aircraft Models. Time and Fuel Saved Without Spending One Red Cent"]

[Text] One day at the end of May, as fighter planes with a scientific research mission took to the air one after another at a certain Air Force division flying field, an old silver haired military man, a calculator in hand, was devoting his complete attention to making mathematical calculations. He was the director of the Air Force Engineering Academy's Aviation Defense Teaching and Research Section, Assistant Professor Chen Xuejin [7115 1331 2806], who was working on experiments for improving optimum ascent procedures for the fifth aircraft model. Results of this experiment showed that this improvement, like the improvement of the previous four aircraft models, saved both fuel and time, and improved aircraft ascent combat capabilities.

This improvement took into account specific meteorological conditions in north and south China, applied the dynamic programming methods of modern cybernetics, emphasized pilot operating ease, and calculated optimums to determine optimum ascent paths that would save both time and fuel for different model aircraft. By applying these methods, it would be possible to save time, to increase aircraft ascent performance, conserve fuel, increase continuous flying time, and strengthen the ascent combat capabilities of aviation units without the need to spend one red cent on any refitting of aircraft, but rather by simply revising some of the original ascent procedure data.

In order for these improvements to bear fruit as quickly as possible, Assistant Professor Chen Xuejin and other comrades conducted more than 70 test flight sorties involving five different models of transport aircraft, attack planes, and fighter planes. These test flights showed that the optimum ascent procedures designed for these five aircraft models had been effective in saving fuel and time. This improvement has been given serious attention by Air Force and civil aviation authorities concerned.

9432

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REPORT ON FIRST RESERVE AIRBORNE TRAINING CENTER

Beijing JIEFANGJUN BAO in Chinese 7 Mar 87 p 2

[Article by Wang Daguo [3769 1129 0948] and Yue Xianfu [1471 3759 3940]: "The Quick Rise of a New Reserve Army; A Chronicle of China's First Reserve Airborne Training Center"]

[Text] Airborne troops are special troops rich in romance and color. Some people term them a magical invincible army, while others hail them as favored by heaven. Such a valiant corps exists in the standing army, so is it possible to have on tap in the reserves a group of such invincible troops who will come when summoned and be able to arrive by "descent?"

Since 1983, Zhoukou Prefecture in Henan Province has served as a reserve base for airborne reserve troops who have mobilized and conducted extended exercises several times, assembling very smoothly. Nevertheless, since such troops ordinarily lack parachute training, after bringing units up to strength, it is difficult to throw them into combat directly. In this connection, a certain airborne unit and the Henan Provincial Military Region have figured out a new way of solving problems with the quality of reserve personnel. During the golden October of 1986, "princes" from leading Air Force organizations, a certain airborne unit, and the Henan Provincial Military Region gathered in Hubei Province, where the weather was pleasant, to look into and discuss in common matters of vital importance in the building of reserve airborne troops. Everyone was of the opinion that parachute training of airborne troops was highly specialized, very difficult, posed high requirements, and took a long time. It was not to be compared with infantry training and training in ordinary specialized skills. It placed high demands on training grounds, teaching staff, and support for jumps such as were not available in the provincial military region system. So how could the training problem be solved?

"Build a reserve airborne troops training center!" Once the commander's line of thinking deployed in depth, a bright spot glistened distinctly before the eyes of all. Since everyone's thoughts are focused on the same spot, why not draw up a plan for general headquarters in order to get training started before the end of the year." This was a suggestion made on the spot by Department Chief Zhai [5049], who had arrived from a leading Air Force organization, and who had been unable to restrain himself. It was in this way

that a certain airborne troop unit and the Henan Provincial Military Region jointly worked up on "Seventh 5-Year Plan Period Airborne Troops Reserve Training Plan" on 27 October.

Given the green light, construction of the training center began feverishly.

Learning from experience. Those responsible for organization in the Zhoukou military subdistrict went to the airborne unit in an on-site fact finding mission of inspection and learning.

Selection of a site: The Shenqiu County militia training base had complete facilities, and it also had an abandoned airfield runway that could be used.

Preparations for construction: The airborne troop unit obligated 5,000 yuan and also provided training equipment including parachute harnesses, rotating swings, hanging rings, and tumbling rings. The provincial military region also provided funds. The county People's Armed Police actively organized construction.

The speed of construction was truly astounding. After 1 month of hectic efforts, China's first reserve airborne troop training center was born. A rudimentary airfield, landing site, parachute training area, tactical training ground, parachute training building and cultural training building had been built to provide trainees training in everything from basic studies on the ground to live jumps in the air.

On 5 December 1986, the training center welcomed its first batch of new trainees. People eagerly awaited them saying: An invincible army has come out of the reserves to descend from the sky!

9432
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PERFORMANCE, SPECIFICATIONS OF 155 MM CANNON/HOWITZER

Beijing BINGQI ZHISHI [ORDNANCE KNOWLEDGE] in Chinese No 3, 15 May 87

[Article by Zhang Xizhe [1728 1585 0772]: "Chinese Manufactured 155 mm Cannon-Howitzer"]

[Text] At the November 1986 Beijing International Defense Technology Exhibition, China displayed the Chinese manufactured 155 mm cannon-howitzer for the first time, attracting interest both inside China and abroad. This cannon compares favorably in terms of performance with other advanced guns of the same kind in the world today. (A picture appears inside the rear cover).

Manufacture

The gun has been fabricated from high strength alloy steel, and welding technology has been used for main components such as the upper carriage, the undercarriage and the main carriage, which both insures stability when the gun is fired and makes the gun lighter than it would otherwise be.

Self-tightening treatment of the gun barrel has increased its life. The stop mechanism employs an automatic screw type breech block, which permits automatic opening of the block and ejection of spent shells (or primer cases). The anti-recoil equipment consists of a recoil brake and a countercoil mechanism. On the recoil brake is a variable recoil mechanism that is able to regulate automatically the length of the recoil angle according to the size of the firing angle. The countercoil mechanism is of the floating piston type, assuring the return to position of the recoil portion at all firing angles.

The rotating upper carriage mechanism is compact, enabling the gun barrel to rotate 360 degrees. With the gun barrel facing rearward when on the march, the total length of the gun is greatly decreased and the carrying capacity of the gun increased. A gas pressure type leveler insures that when the gun is raised and lowered, operation of the elevating mechanism hand wheel can be done with a saving of effort. The left and right sides of the undercarriage are equipped with balance beams and wheels that give the gun considerable ability to travel across country. It is also fitted with pneumatic and hand braking equipment, which can be operated easily and is reliable.

On the main carriage is an air bottle used in operating the shell conveyer, a spade, a drawbar, and a tool box.

When occupying or leaving a position, an hydraulic system is used to change over from a combat to a travel mode. The gun is also fitted with a pneumatic shell conveyer that can load the gun at any firing angle. This not only greatly decreases physical exertion by the soldiers, but also increases firing speed. In order to meet different combat situations and conditions, the gun is fitted with a sight and aiming equipment and is equipped a night lighting system, as well as a fire control system that can meet requirements at from -40 to +50 degrees centigrade.

The gun is supplied with a fairly wide range of ammunition, principal of which is long range full chamber ammunition (ERFB) [0356 5228 1734], that is, the so-called "date shells," which are shaped like a date seed with two pointed ends that reduce air resistance during flight, thereby markedly increasing range. Another kind of ammunition used is long range full chamber yellow phosphorus smoke shells that are effective in producing fires and smoke screens, and that are used primarily for marking targets and finding ranges. Yet another kind of ammunition is the long range full chamber star shell with an illumination time of 1 minute 20 seconds. Then there is the long range full chamber head extraction smoke shell, which is able to eject five smoke canisters and which is used primarily to produce smoke screens to conceal troop movements, but which may also be used as signals and markers. Finally is the long range full chamber head exhaust gas shell (ERFB-BB), the rear of which is fitted with a head exhaust gas device that increases its firing range by 30 percent over the long range full chamber shell. The gun can also use the "NATO" bloc's 155 mm howitzer ammunition.

Characteristics

High Firing Speed. Because the gun uses a semi-automatic screw type breech block and is equipped with a pneumatic ammunition conveyer, its maximum firing speed is 4 rounds per minute for 15 minutes of continuous firing, or an average continuous firing speed of 2 rounds per minute.

Long Range. When the gun fires long range full chamber ammunition (ERFB), maximum range is 30,000 meters. When long range full chamber head exhaust gas shells (ERFB-BB) are fired, the maximum range is 39,000, placing this gun in the world's front ranks for guns of the same type.

Large Field of Fire. The gun's high and low field of fire ranges from -5 to +72; its lateral field of fire is 30 degrees to the left and 40 degrees to the right. It uses multi-grade variable charges and 10 charge numbers. The firepower coverage area is 40 percent greater than for comparable guns of the same type, a matter of strategic importance.

Fairly High Firing Accuracy. When firing long range full chamber shells, accuracy at maximum range is as follows: a probable error of 0.45 percent in range, and a probable error of 0.8 mills in distance.

Good Performance. The levelers on both sides of the gun undercarriage and the pair of wheels allow upward and downward motion that give the gun a fairly high ability to move across open country. When on the march, the gun barrel may also be turned 180 degrees and held secure on a fixed member on the main carriage, which shortens the barrel length and the turning radius when on the march.

Long Barrel Life. Because of the self-tightening treatment, the gun barrel has a fairly long barrel life that is approximately double that of ordinary gun barrels.

Data

Diameter	155 mm
Minimum range	3,500 meters
Gun barrel length (without muzzle brake)	7,045 mm
Number of riflings	48
Rifling twist	20 times diameter (uniform, right turn)
Width of lands	3.81 mm
muzzle brake efficiency	30 percent
Travel mode length	
Gun barrel forward	13,512 mm
Gun barrel rearward	9,068 mm
Travel mode width	2,670 mm
Travel mode height	
Gun barrel forward	3,048 mm
Gun barrel rearward	2,230 mm
Combat mode width	9,931 mm
Total gun weight	9,50 kgs
Speed of movement (motor vehicle drawn)	
Highway	90 km per hour
Cross country	50 km per hour
Muddy ground	15 km per hour
Time for change from travel mode to combat mode	1.5 minutes

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APPLYING TROPICAL MOUNTAIN FOREST COMBAT 'RESEARCH'

Beijing JIEFANGJUN BAO in Chinese 19 Jun 87 p 3

[Article by Kong Deyang [1313 1795 7122]: "Elevating Experience to the Level of Theory--Brief Commentary on Research on Operations in Tropical Mountain Jungles"]

[Text] Counting on one's fingers, we have done research on operations in tropical mountain jungles (below shortened to jungle warfare) for nearly 10 years already. The "school fees" were not small, and it cannot be said that not many experiences were summed up. However, what is to be regretted is that our understanding of the laws of jungle warfare are still inadequate, or, that is to say, it still remains at the perceptual stage of cognition.

Obviously, research on jungle warfare has remained at a low level for a long time, and this fact cannot be separated from our lack of a macroscopic and open consciousness. What causes academic research to be limited to microscopic self-summations is being satisfied with good self-feelings about the method of fighting, and not paying attention to using theoretical thought to distill and refine experiences.

First of all, research on jungle warfare should pay close attention to the country's need for peripheral security in the future. It should be seen that, because of various historical and real factors, on China's peripheral area there have existed for a long time many regional "hot spots" of different natures and forms, a fact that makes China's peripheral strategic circumstances more complex than those of any other country in the world. Following the constant rise of the Asian-Pacific Region's economic, political, and strategic positions in the world's strategic structure, the security question on China's southern periphery has become more prominent.

To be sure, the scale of jungle warfare could be limited, but it would directly affect the country's territorial sovereignty, relate to the nation's security needs, and represent the country's might and its military power. If a military struggle in one place cannot be completely settled, naturally there would be a loss of deterrent force in other peripheral areas and a chain reaction could easily be set off. Therefore, raising the theoretical level of jungle warfare research possesses extremely clear strategic value for the PLA's inquiries into the general laws of future local wars and for national defense modernization.

Next, research on jungle warfare should make lateral comparisons with the operational experiences of foreign armies. In fact, what the PLA's research on jungle warfare lacks is not "individual" specific experiences but a "general" theory of a fairly high level. Making lateral comparisons with the experiences of foreign armies in jungle warfare can make the PLA, in its comprehensive comparative analysis, find the guiding laws of jungle warfare and improve its military results, and also provide a real frame of reference for the PLA's reform.

Generally speaking, experience always has a strong specificity and mutability, and theory has a strong universality and regulatory nature. Without the slightest doubt, if we want to raise operational experience to the level of operational theory, scientific rational speculation is an indispensable bridge between them. Only by breaking out of the "thinking pit" of direct perception by the senses that goes from one experience to another can we establish an advanced theory.

Finally, in research on jungle warfare, we must combine military reform and practice. Jungle warfare is not just a "training site"; more importantly it is a comprehensive "testing site" for military reform. It is said that the U.S. Army, in order to study the theory of small wars comprehensively, systematically, and thoroughly, expended a large amount of funds to build a large jungle warfare testing base on an island, which after various tests provided a theoretical basis for military reform. This shows that only by closely integrating reform and practice in the units' system and establishment, weapons and equipment, education and training, campaigns and tactics, and battlefield construction can academic research provide a scientific basis for accelerating the PLA's modernization and give full play to the guiding role of theory. Therefore, research on jungle warfare must not be limited to specific ways of fighting, but should be research that is omnidirectional and multifaceted.

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ASSIGNMENTS OF 2D ARTILLERY ENGINEERING GRADUATES

Beijing JIEFANGJUN BAO in Chinese 6 Jun 87 p 1

[Article by Zhang Jiajun [1728 1367 6511] and Zhang Yuying [1728 3768 3853]: "100 Percent Obedience Rate For Assignments Following Graduation For 9 Consecutive Years; 2d Artillery Engineering College Students Intensify Patriotic Feelings and Dedication to the Service of the Country"]

[Text] For 9 consecutive years since 1978, the rate for obedience to assignments following graduation at the 2d Artillery Engineering College has been 100 percent. Before graduation assignments were made in 1987, that year's graduates all submitted requests to the CPC organization volunteering to make a contribution by working in hardship areas.

Perseverance in linking student education in the development of their talents with ideological education and education in devoting themselves to the country, and actively leading young students in molding themselves to become skilled people useful in the modernization of national defense has been one method employed by this college for many years. Most of the students that the college enrolls each year are graduates of civilian senior middle schools, a majority of whom have set out on a course of becoming skilled by pursuing bachelors, masters and doctors degrees and who lack the psychological preparation to "pitch camp" in hardship areas and make a contribution to the modernization of the armed forces. The school has adopted several kinds of education to deal with this, persisting in stressing "major principles" with students, and in buttressing students' sense of mission and sense of honor so that students get a correct understanding of how to make themselves into useful people.

In view of student apprehensions about being sent to a mountain ravine following graduation where "it will be difficult to find a mate or establish a home," and where "life will be boring and hard to bear," the college organized students for sightseeing trips to places of historic interest and scenic beauty in the motherland, and to pay respects at revolutionary sites by way of stirring in students a will to "cherish the motherland and be willing to go to mountain ravines to insure the success of the four modernizations." During their second year in the college. 64 percent of the class of '82 students in the cybernetics course expressed unwillingness to go to mountain ravines. Following education, 85 percent took the initiative in requesting the CPC Committee to sent them to mountain ravines in frontier regions, and 100 percent of the students wrote statements resolving to obey assignments.

NANJING GROUP ARMY IMPROVES TRAINING DISCIPLINE

Beijing JIEFANGJUN BAO in Chinese 8 Jun 87 p 1

[Article by Tang Fen [3282 1164] and Wu Pinxiang [0702 0756 4382]: "Group Army Perfects Training Regulations; Draws Up Duties For All Categories of Personnel From Army Commander to Privates; Completes 14 Different Systems including Those Applicable to Training Plans, Training Standards, and Checking and Examination Preliminary to Acceptance; First Steps Taken To Put the Management of Training on a Regular Track; Training Freed From Individual Caprice and Limitations"]

[Text] In early May, a certain group army of the Nanjing Military Region assembled officers in charge from the group army, division (or brigade) and regimental levels for an analysis of the training situation during the first half of the year, which concluded as follows: The quality of individual soldier training completed in 1987 has been markedly better than in previous years. Sample testing of some new soldiers conducted by General Headquarters and the military region showed all to have scored outstandingly in seven different subjects. Old soldiers undergoing retraining also scored an average of good or better. All the training currently underway is also being done solidly and in good order. This is the heartening result of having established training regulations and put them into effect.

In early 1987, this group army's CPC Committee analyzed the main reasons why only half the results had been obtained from twice the effort in previous training, attributing them to a lack of systematic and complete training rules and regulations, which had made it difficult to free training from individual caprice and limitations. The group army CPC Committee linked a change in this state of affairs to study of the implementation of the spirit of the enlarged meeting of the Central Military Commission and devoted serious attention to the task of drawing up regulations pertaining to training. It acted on the basis of training regulations, "the Detailed Outline" and course of study, directives, and manuals issued by General Headquarters to prescribe duties of 18 different kinds, at five levels in three categories that applied to all categories of personnel from the army commander to privates. They established 14 different training systems including those for complete training plans, training controls, training standards, training discipline, training support and teacher lesson preparation instructions, for teaching assignments level by level, for checking on attendance and registration, for regular class

training, for evaluating instructors and students, for training files, for safety and the prevention of accidents, and for rewards and punishments to form a preliminary complete body of scientific training regulations so that troop units would have a guide to follow.

After establishing the training regulations, this group army made sure to carry them out strictly, insuring the implementation of every training system and duty. In February 1987, the group army headquarters discovered that leaders of a certain regiment had unauthorizedly changed annual training plans. It acted to correct this situation at once, not only directing that training deficiencies be made up within a certain period of time, but also issuing an armywide notice of criticism. This group armed linked cadre promotions and soldiers' entrance into the Party and the youth league, rewards for rendering outstanding service, sitting for examinations to enter schools, the study of skills useful in civilian life, and good marks for training to the implementation of training regulations. Those who took a firm grip on the conduct of training and those who showed outstanding accomplishments in training were rewarded; those who changed training plans capriciously or who did not complete training assignments, and those whose quality of training was poor were punished. In addition, unit leaders were held accountable. During the first half of the year, the combined arms army CPC Committee issued commendations and awards to eight leaders of divisions and regiments who had taken a firm grip on the conduct of training, and to 10 units whose accomplishments in training had been outstanding. In addition, more than 2,000 members of the group army who were the cream of the crop in training were issued merit awards, and 300 who were the cream of the crop in training were given priority in sitting for examinations to enter military schools. At the same time, one brigade leader who had done a poor job in taking firm grip on training, and two leaders of regimental units whose training achievements were just so so were subjected to stern criticism and their qualifications for selection as advanced individuals and units were negated. The strict enforcement of regulations and the clear distinctions between rewards and punishments fully aroused the enthusiasm for training of military units and overcame indifference about whether training was done well or not.

During the first half of 1987, military officers in charge of the army, divisions, and regiments devoted their principal energies to troop training, and provided the group army CPC Committee with regular detailed progress reports, reporting back on the organization of troop training. There was no conflict between other routine duties and training; rational planning provided a place for both. Ad hoc assignments did not take time away from training. Conflicts were resolved skillfully and scientific arrangements made. From the staff organization level to troop units, training was organized according to plan, was carried out in an orderly fashion, and testing was done against standards, thereby overcoming capricious changes in training plans, fudging of training, omitting some training, and lowering training standards. Troop training began to be put on a regular track, quality and quantity being maintained in the completion of both military training and other work tasks.

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